

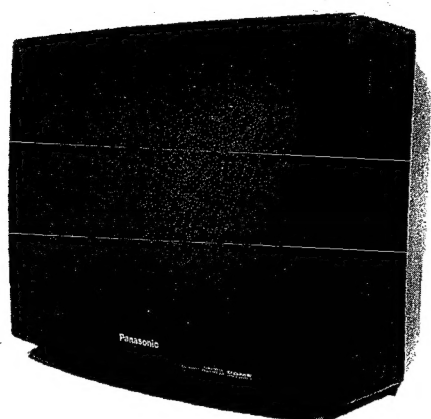
# Service Manual

Colour Television

TX-21GF10M

TX-21GF10Z

MX-2 Chassis



## Specifications

**Power Source :** (AC) Auto110-240V, 50/60Hz

**Power Consumption:** 121 W  
5 W (Stand-by condition)

**Aerial Impedance :** 75  $\Omega$  unbalanced ,  
Coaxial type

**Receiving System :** 12 Systems

### Receiving Channels :

|      |                                   |
|------|-----------------------------------|
| VHF  | 2 - 12 PAL B, G                   |
|      | 0 - 11 PAL B (Australia)          |
|      | 1 - 11 PAL B (New Zealand)        |
|      | 1 - 12 NTSC M (Japan)             |
|      | 2 - 13 NTSC M (Japan)             |
| UHF  | 21 - 69 PAL B, G, I/SECAM B, G, I |
|      | 28 - 69 PAL G (Australia)         |
|      | 13 - 57 PAL D                     |
|      | 13 - 62 NTSC M (Japan)            |
|      | 14 - 69 NTSC M (U.S.A)            |
| CATV | S1 - S20                          |

### Intermediate Frequency :

|        |                     |
|--------|---------------------|
| Video  | 38.0 MHz            |
| Sound  | 31.5 MHz (D, K, K1) |
|        | 32.0 MHz (I)        |
|        | 32.5 MHz (B, G)     |
|        | 33.5 MHz (M)        |
| Colour | 33.57 MHz (PAL)     |
|        | 33.6 MHz (SECAM)    |
|        | 33.75 MHz (SECAM)   |
|        | 34.42 MHz (NTSC)    |

### Video / Audio Terminals :

|           |                 |                         |
|-----------|-----------------|-------------------------|
| AV 1, 2 : | Video ( PHONO ) | 1 Vp-p 75 $\Omega$      |
|           | S-Video         | Y : 1.0Vp-p 75 $\Omega$ |
|           |                 | C : 0.3Vp-p 75 $\Omega$ |
|           | Audio(PHONO)    | Approx:400mV            |

|              |                 |                       |
|--------------|-----------------|-----------------------|
| Monitor Out: | Video ( PHONO ) | 1 Vp-p (75 $\Omega$ ) |
|              | Audio ( PHONO ) | Approx : 400mV        |

**High Voltage :** 28.5 kV ( +0.7, -1.5 )  
at zero beam current

**Picture Tube :** A51KES165X (Singapore)  
54 cm (21")  
A51KES167X (N.Zealand)  
51 cm(21")  
Measured diagonally,  
110° deflection

**Audio Output :** 5.0 W x 2  
2 Speaker system L/R

**Speaker :** 128 x 7mm, 8 $\Omega$ , ovaltype x 2  
2 Speaker system L/R

**Dimensions :** Height : 441 mm  
Width : 532 mm  
Depth : 394 mm

**Mass :** 22.5 kg ( Net )

**Remote Controller :** 37 Functions infrared controller

Specifications are subject to change without notice.  
Mass and dimensions shown are approximate

# Panasonic

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## Safety Precautions

### General Guide Lines

1. It is advisable to insert an isolation transformer in the AC supply before servicing this hot chassis.
2. When servicing, observe the original lead dress, especially the lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shields, and isolation R-C combinations, are properly installed.
4. When the receiver is not to be used for a long period of time, unplug the power cord from the AC outlet.
5. Potential, as high as 29.2 kV, is present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture tube to the receiver chassis before handling the tube.
6. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

### Leakage Current Cold Check

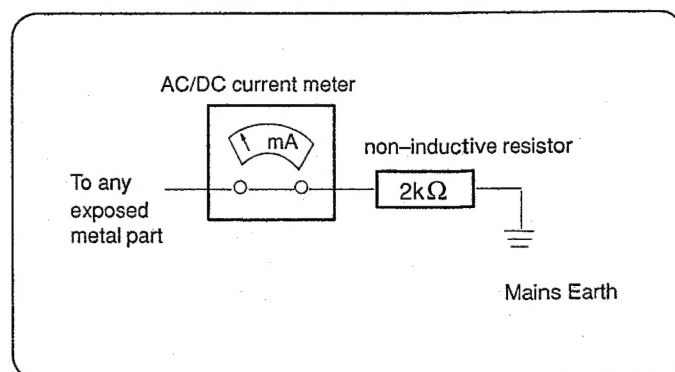
1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Turn on the receiver's power switch.
3. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control shafts, etc. When the exposed

metallic part has a return path to the chassis, the reading should be between 4 M $\Omega$  and 20 M $\Omega$ .

When the exposed metal does not have a return path to the chassis, the reading must be infinite.

### Leakage Current Hot Check ( See NO TAG)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 2 k $\Omega$  non-inductive resistor and an AC/DC current meter, in series with each exposed metallic part on the receiver in turn and an earth such as a water pipe.
3. The current from any point should not exceed 0.7 mA peak AC or 2mA DC. In the case of a measurement being outside of these limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.



**Fig. 1 Hot - Check Circuit**

## X-Radiation

### Warning :

The potential sources of X-Radiation in TV sets are the EHT section and the picture tube.

When using a picture tube test jig for service, ensure that jig is capable of handling 29.2 kV without causing X-Radiation.

**Note :** It is important to use an accurate periodically calibrated high voltage meter.

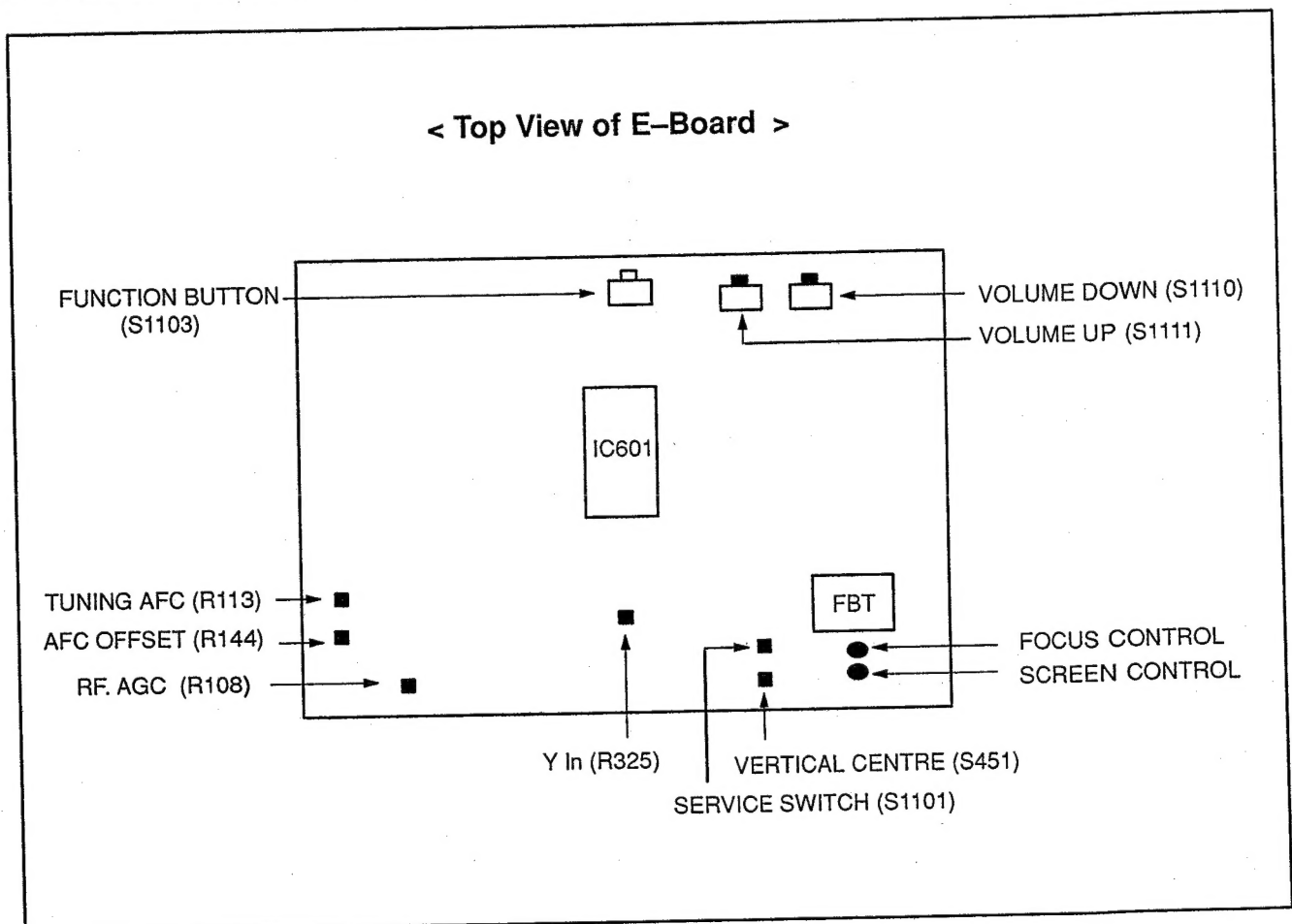
1. Set the brightness to minimum.
2. Set the service switch to the SERVICE position.
3. Measure the EHT. The meter reading should indicate 28.5 ( +0.7, -1.5 ) kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
4. To prevent the possibility X-Radiation, it is essential to use the specified picture tube, if service replacement becomes necessary.

## Shut Down Circuit Test

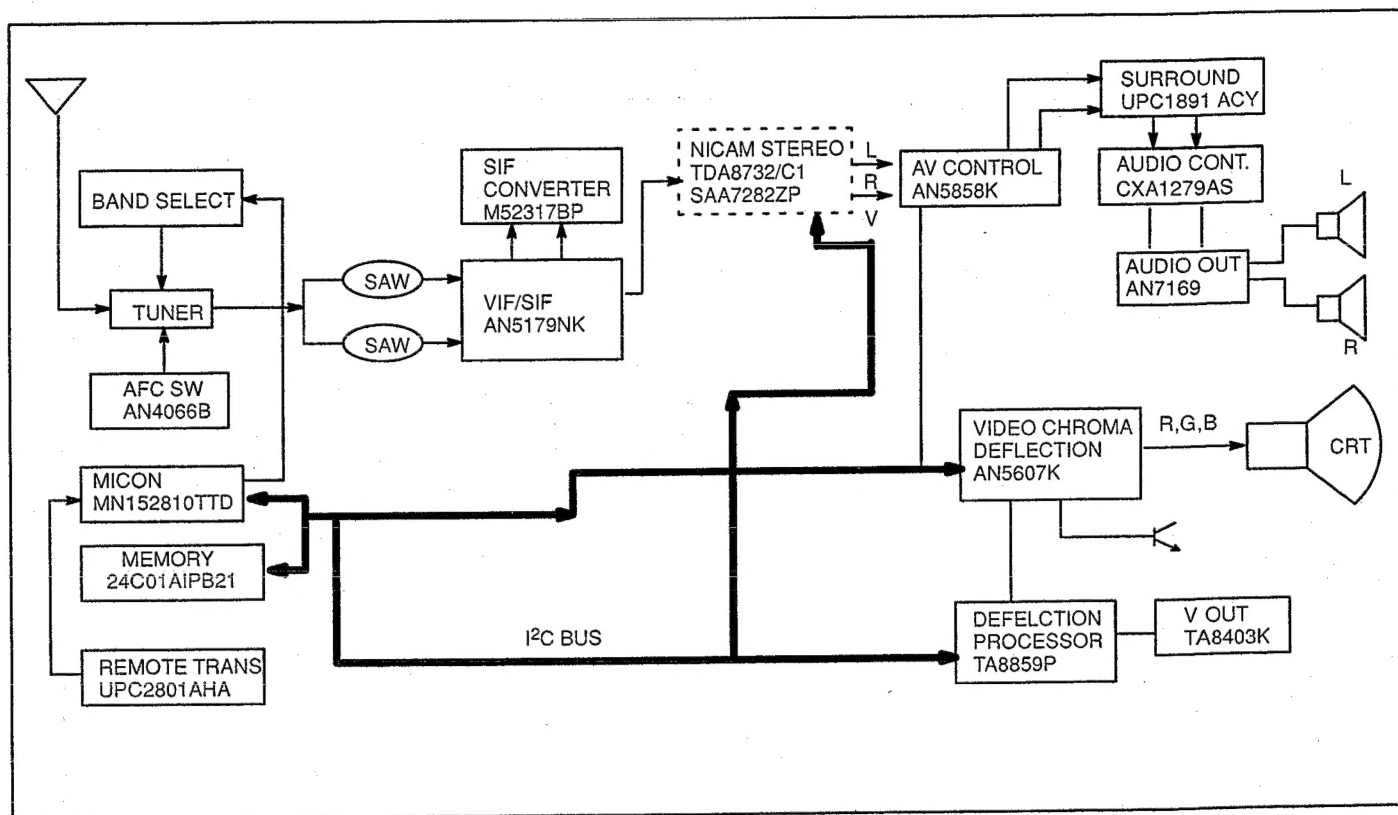
This test must be made as a final check before the set is returned to the customer.

1. Operates the TV set.
2. Set Controls :  
Screen ( on FBT ) .... minimum  
Contrast ..... minimum  
Colour ..... minimum
3. Connect a DC voltmeter to cathode of D523, and confirm that the voltage reading is 26.3 V, or less.
4. Supply 26.3 V DC to cathode of D523 and confirm that the shut down circuit does not operate.
5. Supply 28.5 V DC to cathode of D523, and confirm that the shut down circuit operates.
6. Switch the set off and disconnect the DC supply. Switch the set on and Normalize the contrast and colour.

## Location of Controls



**Fig. 2**

**MX-2 Chassis Block Diagram****The I<sup>2</sup>C Bus Concept :****A. Features**

1. The I<sup>2</sup>C bus is a 2 – wire serial bus consisting of a clock line (SCL) and a data line (SDA).
  2. It allows bi – directional data transfer, between IC's.
  3. It consists of a master and one or more slave IC's.
- The master initiates transfer and generates clock signals.
  - The slave is the IC addressed by a master.

## B. Basic Format of the I<sup>2</sup>C Data transmission from the microcomputer (IC1102) to the IC601.

### 1. Transfer Timing

During transmission from the microcomputer to IC601, 12 bytes of each of the following types of information is transferred one at a time:

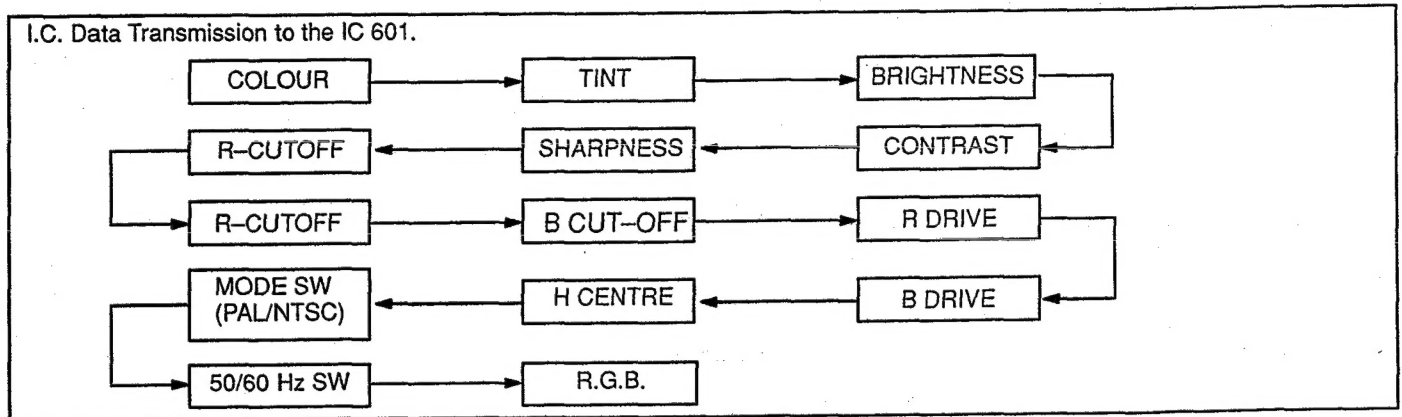


Fig. 4

### 2. Format

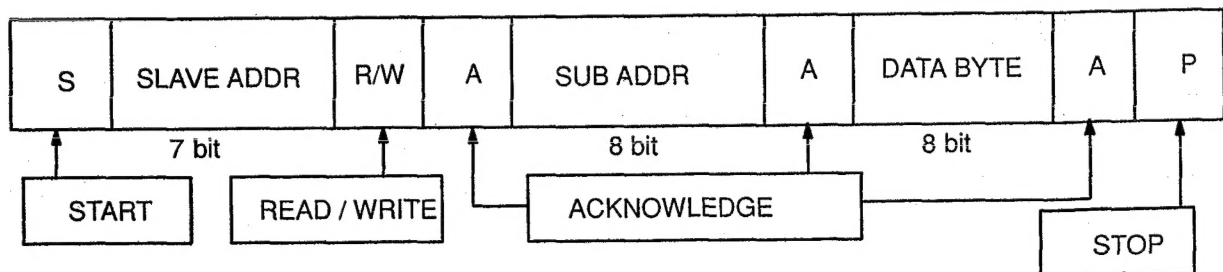


Fig. 5

## C. I<sup>2</sup>C Application in the MX-2 Chassis.

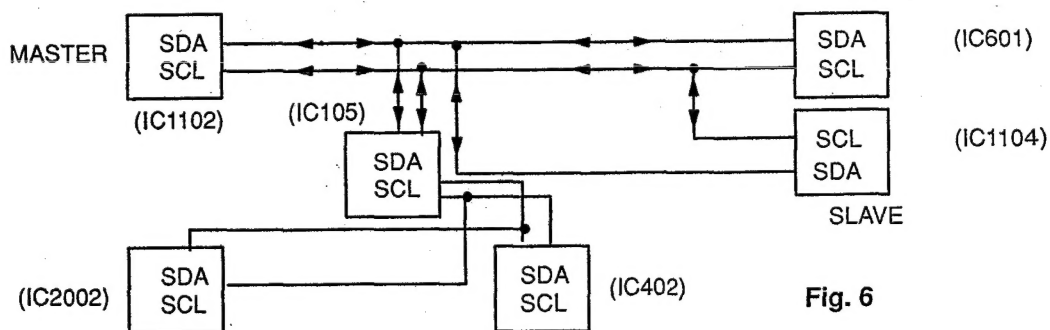


Fig. 6

During transfer the microcomputer IC1102 in the TV set is always the master device. IC601 and IC1104 are slave addressed by IC1102.

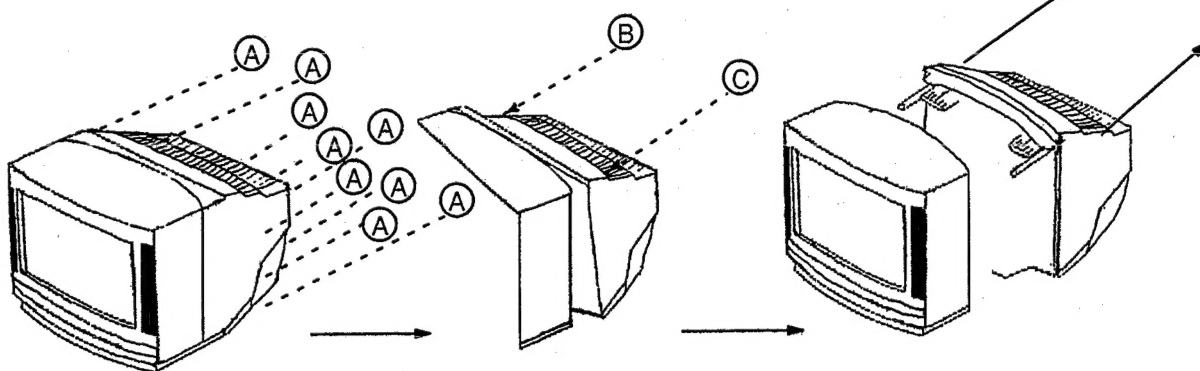
1. Various control functions are possible via the I<sup>2</sup>C bus from the microcomputer IC1102 to VCJ IC601, as shown in Fig. 4.
2. Data like position, BT voltage, band, AFC, skip, volume, recall, power and off timer setting, service mode setting, colour setting, function etc, are stored and read out from the EEPROM IC1104 via the I<sup>2</sup>C bus.

## Disassembly and Set-up Mode

### 1. Service Position for E-Board.

1. Remove the back cover as shown in fig. 7.

1. Unscrew the back cover as shown at (A) ( 9 pcs )



2. Pull both edges at the bottom of the back cover as shown in diagram above till the edge comes out slightly as shown in the next diagram.

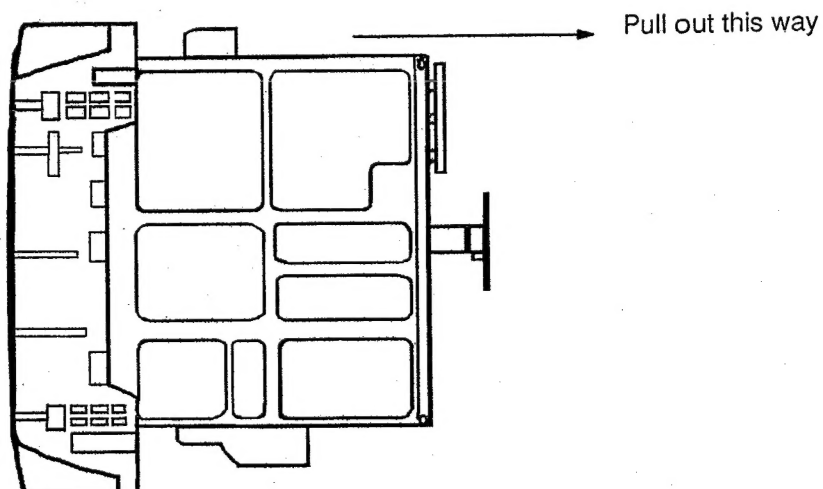
3. Pull slightly on (B) and (C) till it opens.

4. Hold the cabinet and pull the back cover from the cabinet.

**Fig.7**

2. Stand the TV set as shown in fig. 8.

3. Remove the E-Board from the TV set by pressing the chassis guide and pulling the main board out as shown in figure 8.

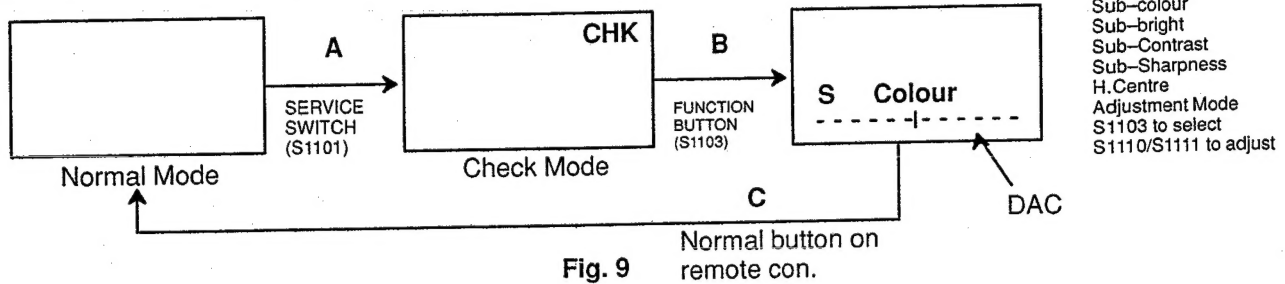


**Fig.8**

## 2. How to set the Factory Mode for adjustment.

Follow the Steps shown in the block diagram below to set the Factory Mode for sub-colour; sub-bright; sub-contrast; RGB low-light and RGB high-light adjustments and return to Normal mode after adjustment. When the IC601(VCJ) or IC1104 are replaced, these adjustment must be done as below.

### The Sub Adjustment mode.



A: Press the Service Switch (S1101).

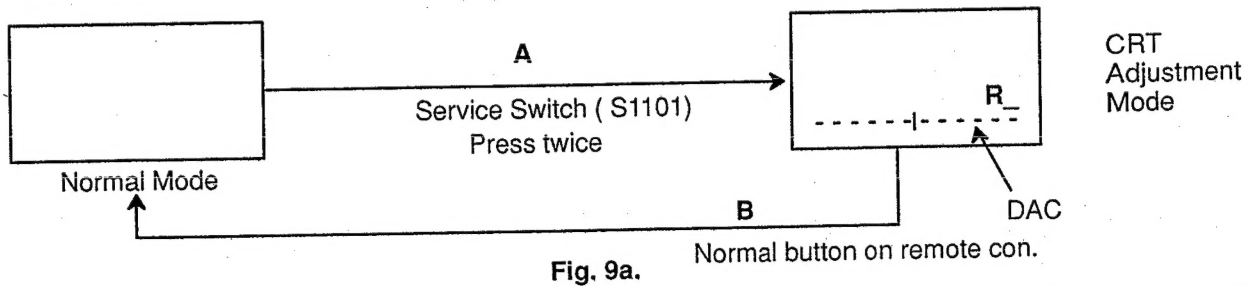
The TV in the Normal mode changes to check mode. "CHK" will appear on the screen as shown in Fig. 9.

B: Press the Function button (S1103) to select the required adjustment to be adjusted as shown in Fig. 9.

Press the Volume "up" or "down" button (S1110 & S1111) to change the DAC level.

C: Press the Normal button on the remote control transmitter twice to return to Normal mode.

### The CRT Adjustment mode.



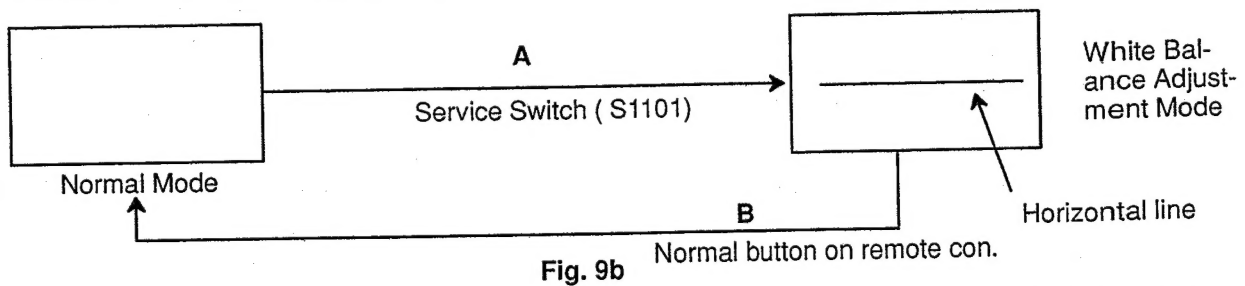
A: Press the Service Switch (S1101) twice. The TV in the Normal mode changes to the CRT Adjustment mode.

Press the Function button (S1103) to select the required adjustment to be adjusted as shown in Fig. 9a. (Please refer to procedure on page 12).

Press the Volume "up" or "down" button (S1110 & S1111) to change the DAC level.

B: Press the Normal button on the remote control transmitter twice to return to Normal mode.

### The White Balance Adjustment mode.



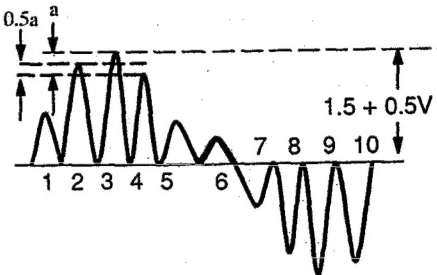
A: Press the Service Switch (S1101) twice. The TV in the Normal mode changes to the CRT Adjustment mode. Then press the Service Switch once more to enter White Balance Adjustment mode. (Please refer to procedure on page 12).

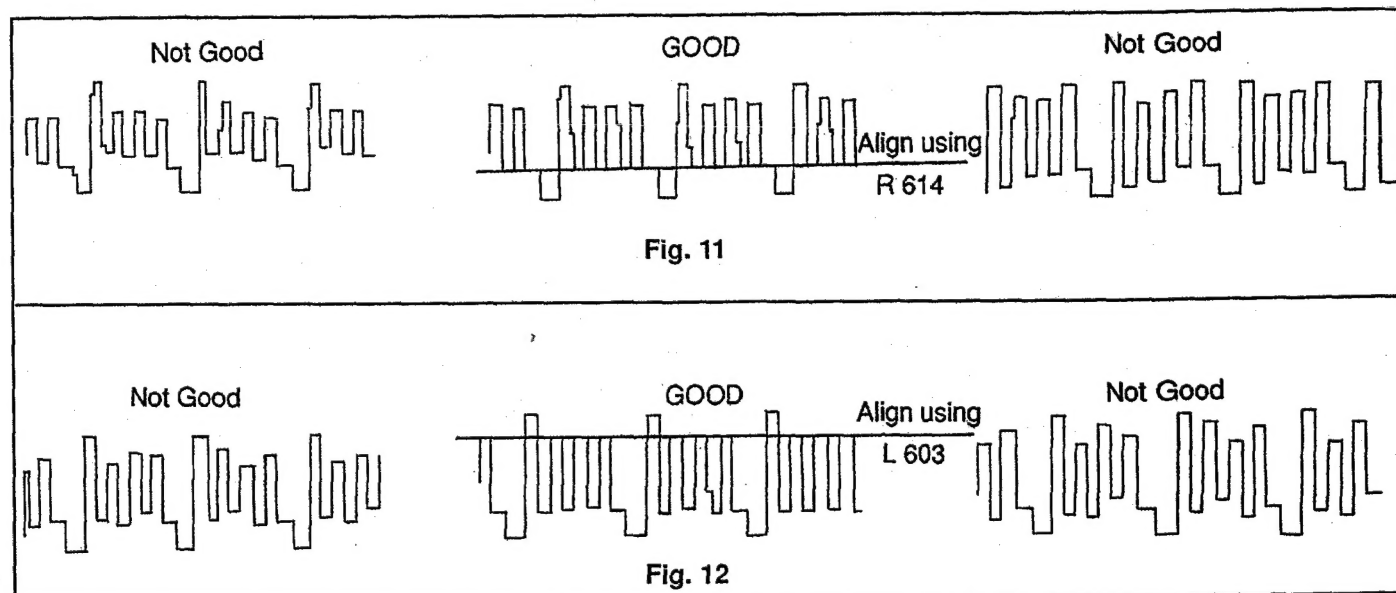
Press the Volume "up" or "down" button (S1110 & S1111) to change the DAC level.

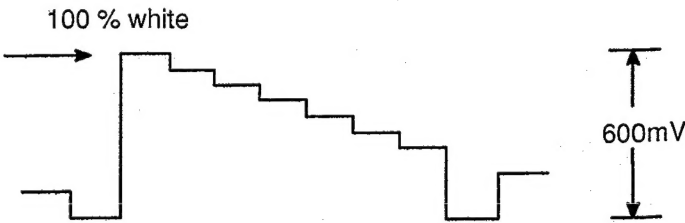
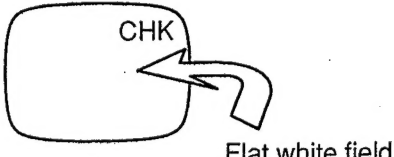
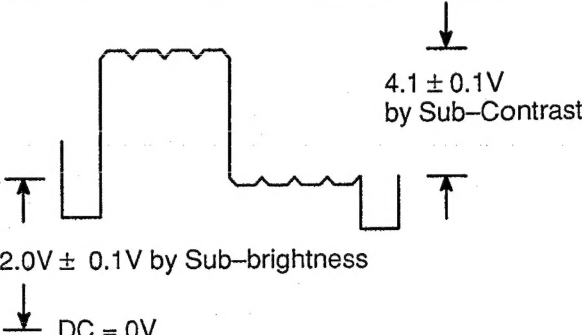
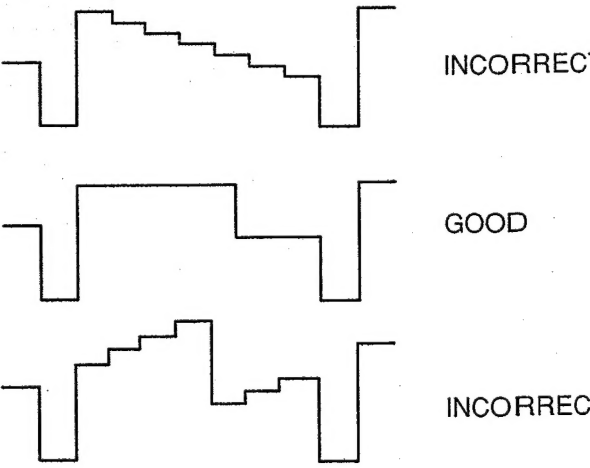
B: Press the Normal button on the remote control transmitter twice to return to Normal mode.

## Adjustment Procedure

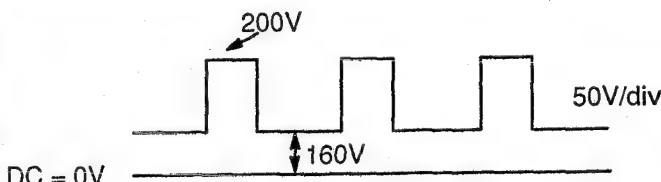

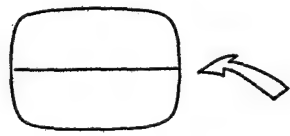
| Item / Preparation  | Adjustment Procedure  |
|---|---|
| <b><u>B Voltage</u></b><br>1. Operate the TV set.<br>2. Set control as follow:<br>Brightness ..... minimum<br>Contrast ..... minimum  | Confirm the DC voltages at the indicated test points, as follow:<br><div style="display: flex; justify-content: space-between;"> <div>             Pin 1 IC803 : <math>142.0 \pm 2.0</math> V<br/>             TPE4 : <math>26.0 \pm 1.5</math> V<br/>             TP6 : <math>5.0 \pm 0.5</math> V           </div> <div>             TP8 : <math>12.0 \pm 1.0</math> V<br/>             Pin-1 of E33 : <math>200.0 \pm 15.0</math> V<br/>             TP 9 : <math>9.0 \pm 1.0</math> V           </div> </div> |
| <b><u>Tuning AFC and AFC offset</u></b><br>1. Operate the TV set and disconnect on aerial.<br>2. Connect a jumper lead between TPB 19 and TP8 to mute the normal tuning AFC. Connect a DC voltmeter to TPB 19 and earth<br>3. Connect a DC voltmeter to TPB 11.   | 1. Adjust tuning AFC Control ( R144 ) for $2.75 (+ 0.1, -0.05)$ V.<br>2. Connect the DC voltmeter to TPB 11.<br>3. Adjust AFC offset control (R113) for $5.5V \pm 0.2$ at TPB 11.   |
| <b><u>RF AGC</u></b><br><b><u>A. Workshop</u></b><br>1. Receive a colour bar signal at an RF level of $61 \pm 2$ dBuV ( $289.9\mu V \pm 230.8\mu V$ ) with $75\Omega$ loaded.<br>2. Connect an oscilloscope to TPB 12, set to DC mode.<br><b><u>B. Field</u></b><br>1. Receive the television broadcast channel known to have the weakest RF signal strength. | 1. Turn RF AGC control ( R108 ) fully clockwise.<br>2. Slowly turn RF Control counterclockwise to set it at the point just before voltage at TPB 12 begins to drops.<br><br>1. Turn RF AGC control ( R108 ) such as to produce a snowy picture.<br>2. Slowly turn back R108 off until the snow ( picture noise ) disappears.<br>3. Check the remaining broadcast channels for either snow or AGC overload and readjust R108 if necessary.   |
| <b><u>High Voltage</u></b><br>1. Operate the TV set.<br>2. Set controls as follow:<br>Brightness ..... minimum<br>Contrast ..... minimum  | 1. Connect a DC voltage meter to Pin 1 of IC803 and confirm the voltage is $142.0 \pm 2.0$ V.<br>2. Connect a high voltage meter to anode of the picture tube.<br>3. Confirm that the high voltage is within the range of $28.5 (+ 1.2, -1.5)$ kV.<br>4. Normalize the brightness and contrast.   |

| Item / Preparation  | Adjustment Procedure  | Waveform  |
|---|---|---|
| <b><u>M-NTSC Sub-Tint Adjustment</u></b><br><br>Apply NTSC rainbow pattern.<br>Connect an oscilloscope to TP17.<br>Connect a short jumper between TPE7 and TP10.<br>Press S1104 colour system SW to NTSC 4.43.<br>Colour ..... NORMAL or CENTRE<br>Bright ..... NORMAL or CENTRE<br>Contrast ..... NORMAL or MAX.<br>Tint ..... NORMAL or CENTRE<br>Press SERVICE SW (S1101), then press S1103 (FUNC.) to Sub-Tint.<br>Confirm CHK display on screen. | Confirm the amplitude of waveform:<br>$1.5 \pm 0.5V$<br><br>1. Set Colour control to maximum and confirm that the colour level is saturated enough.<br>2. Adjust Sub-Tint so that the peak level of waveform is similar to Fig. 10.<br>3. Press NORMAL (S1107), CHK should disappear from screen.<br>4. Confirm Colour max level at colour Max condition by colour control.<br><br>Note: Use Remote control only when adjusting User Control. |  <p style="text-align: center;"><b>Fig. 10</b></p> |
| <b><u>Delay Line</u></b><br><br>1. Receive a PAL colour bar signal.<br>2. Connect an oscilloscope to TP 18.<br>3. Normalize Colour and Contrast settings.   | 1. Adjust R614 to align the lower portion of the waveform shown in Fig. 11.<br>2. Adjust L603 to minimize the difference in levels between the higher portions of the waveform as shown in Fig. 12.<br><br>Hint : At the correct R614/L603 alignment the waveform seem on the oscilloscope becomes "stable".  | <p style="text-align: center;">See below.</p>   |



| Item / Preparation   | Waveforms   |
|--|---|
| <b>Y-input, Sub-Contrast, Sub-Brightness and Sub-colour</b>  |  <p>100 % white</p> <p>600mV</p> <p>Fig. 13</p>   |
| <ol style="list-style-type: none"> <li>1. Input a colour bar signal with white at 100% of peak level. Connection can be made via A/V and this may enable adjustment of the pattern generator video output level to obtain the correct black to white amplitude ( at TPH 9 ).</li> <li>2. Confirm that the Sync tip to white amplitude is <math>600\text{mV} \pm 40 \text{ mV}</math> at TP15 ( under IC601 ) and adjust R325 to achieve this level if necessary, as shown in Fig. 13.</li> <li>3. Receive a colour bar pattern. Connect an oscilloscope to pin 3 of plug Y32 on the Y-PCB ( on the CRT neck ) and chassis earth.</li> <li>4. Set Colour, Brightness and Contrast to Normal ( Colour and Brightness at centre, Contrast at max. )</li> <li>5. Connect a short jumper between TPE7 and TP10 ( chassis ). Note that this step disable the ABL, so avoid operation in this condition for long periods at high beam current.</li> </ol> |  <p>CHK</p> <p>Flat white field</p> <p>Fig. 14</p>  |
| <ol style="list-style-type: none"> <li>6. Press the Service Switch ( S1101 ). The screen should then show a flat whitish field, with the OSD message "CHK" possibly visible at the top as shown in Fig. 14.</li> <li>7. Press the Function button ( S1103 ) to select the required function to be adjusted ( in this case " Contrast " ).</li> <li>8. Now press either the Volume " up or down " buttons ( S1110 or S1111 ). " S " and " Contrast " will be displayed on the screen, indicating " Sub " Contrast, and the Sub-Contrast level will be changed. Note that the Volume " up or down " buttons must be pressed while the Function ( i.e. Contrast ) OSD is still on screen.</li> </ol>  |  <p><math>4.1 \pm 0.1\text{V}</math> by Sub-Contrast</p> <p><math>2.0\text{V} \pm 0.1\text{V}</math> by Sub-brightness</p> <p>DC = 0V</p> <p>Fig. 15</p> |
| <ol style="list-style-type: none"> <li>9. Press the Function button ( S1103 ) to select Brightness and then the Volume " up or down " buttons ( S1110 or S1111 ) will similarly permit Sub-Brightness to be altered and adjusted.</li> <li>10. Adjust the Sub-Brightness ( first ) and Sub-Contrast ( second ) to produce the waveform shown in Fig. 15.</li> <li>11. Using the Function button ( S1103 ) and Volume " up and down " buttons ( S1110 and S1111 ). Select Sub-colour and adjust to produce the waveform shown in Fig. 16.</li> <li>12. Cancel the " CHK " mode by pressing the Normal button twice on remote control transmitter and remove the TPE7 to TP10 jumper.</li> </ol>   |  <p>INCORRECT</p> <p>GOOD</p> <p>INCORRECT</p> <p>Fig. 16</p>   |

## ADJUSTMENTS PROCEDURE FOR WHITE BALANCE

| Item / Preparation  | Adjustment Procedure   |                |     |         |   |                |              |   |                |                |   |                |               |   |    |                |   |   |               |   |                |                |
|---|--|----------------|-----|---------|---|----------------|--------------|---|----------------|----------------|---|----------------|---------------|---|----|----------------|---|---|---------------|---|----------------|----------------|
| <b>CRT CUT-OFF</b>  |  |                |     |         |   |                |              |   |                |                |   |                |               |   |    |                |   |   |               |   |                |                |
| <ol style="list-style-type: none"> <li>1. Input a flat white Field signal, and set Contrast to minimum.</li> <li>2. Connect an oscilloscope to TPY 1 ( Green CRT drive ) and TPY 2 ( Ground ). TPY 1 and TPY 2 are located on the Y-PCB ( CRT neck panel ).</li> <li>3. Push the Service Switch ( S1101 ) TWICE to select CRT ADJUSTMENT Mode ( shown in Fig. 9a on page 7 ). " CHK " will appear on the screen.</li> <li>4. Press the Function button ( S1103 ) FOUR times to select "BR" ( meaning " brightness " ). Note that repeated pushing of the Function button cycles through the CRT adjustment as shown in Fig. 16.</li> <li>5. WHILE " BR " IS STILL ON SCREEN, set the screen control to minimum by turning it anti-clockwise, and use the Volume " up " or " down " button - ( S1110 ) and S1111 ) to set the DC=0V to video level at 160V, as shown in Fig. 17.</li> <li>6. Advance the screen control sufficiently to see the OSD, WHILE " BR " IS STILL ON SCREEN, ( push the Function button to bring it up again if necessary ), push the Service Switch ( S1101 ) again. This will collapse the vertical scan.</li> <li>7. Slowly adjust the screen control such that one of the R, G or B beams just appears, across the centre of the screen, ( Fig. 19 ). THIS IS THE SETTING POINT FOR THE SCREEN CONTROL. Note which colour appeared, and DO NOT ADJUST THE LOW-LIGHT SETTING FOR THIS PARTICULAR COLOUR IN THE FOLLOWING PROCEDURE.</li> </ol> | <table border="1"> <thead> <tr> <th>PRESS S1103</th> <th>OSD</th> <th>MEANING</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>R<sub>-</sub></td> <td>RED LOWLIGHT</td> </tr> <tr> <td>2</td> <td>G<sub>-</sub></td> <td>GREEN LOWLIGHT</td> </tr> <tr> <td>3</td> <td>B<sub>-</sub></td> <td>BLUE LOWLIGHT</td> </tr> <tr> <td>4</td> <td>BR</td> <td>SUB BRIGHTNESS</td> </tr> <tr> <td>5</td> <td>R</td> <td>RED HIGHLIGHT</td> </tr> <tr> <td>6</td> <td>B<sub>-</sub></td> <td>BLUE HIGHLIGHT</td> </tr> </tbody> </table> <p>Fig. 16</p> <p>Operation of the Function Button ( S1103 ) in CRT Adjustment Mode</p>  <p>Fig. 17</p> <p>Sub - bright adjustment</p>  <p>PUSH SERVICE SWITCH ( S1101 ) WHILE " BR " IS STILL ON SCREEN TO COLLAPSE THE FRAME SCAN.</p> <p>Fig. 18</p>  <p>ADJUST SCREEN UNTIL ONE COLOUR JUST APPEAR.</p> <p>Fig. 19</p> | PRESS S1103    | OSD | MEANING | 1 | R <sub>-</sub> | RED LOWLIGHT | 2 | G <sub>-</sub> | GREEN LOWLIGHT | 3 | B <sub>-</sub> | BLUE LOWLIGHT | 4 | BR | SUB BRIGHTNESS | 5 | R | RED HIGHLIGHT | 6 | B <sub>-</sub> | BLUE HIGHLIGHT |
| PRESS S1103   | OSD  | MEANING        |     |         |   |                |              |   |                |                |   |                |               |   |    |                |   |   |               |   |                |                |
| 1   | R <sub>-</sub>   | RED LOWLIGHT   |     |         |   |                |              |   |                |                |   |                |               |   |    |                |   |   |               |   |                |                |
| 2   | G <sub>-</sub>   | GREEN LOWLIGHT |     |         |   |                |              |   |                |                |   |                |               |   |    |                |   |   |               |   |                |                |
| 3   | B <sub>-</sub>   | BLUE LOWLIGHT  |     |         |   |                |              |   |                |                |   |                |               |   |    |                |   |   |               |   |                |                |
| 4   | BR   | SUB BRIGHTNESS |     |         |   |                |              |   |                |                |   |                |               |   |    |                |   |   |               |   |                |                |
| 5   | R  | RED HIGHLIGHT  |     |         |   |                |              |   |                |                |   |                |               |   |    |                |   |   |               |   |                |                |
| 6   | B <sub>-</sub>   | BLUE HIGHLIGHT |     |         |   |                |              |   |                |                |   |                |               |   |    |                |   |   |               |   |                |                |

| Item / Preparation                  | Adjustment Procedure  |
|-------------------------------------|---|
| <b>R, G, B LOW LIGHT ADJUSTMENT</b> | <p>EXAMPLE: If a green line appeared at Step 7.</p> <pre> graph TD     Start[Service SW S1101] --&gt; FullScan1[FULL SCAN]     FullScan1 --&gt; SelectR[Function S1103 to select R]     FullScan1 --&gt; SelectB[Function S1103 to select B]     SelectR --&gt; ScreenR[Screen with dashed line and R label]     SelectB --&gt; ScreenB[Screen with dashed line and B label]     ScreenR --&gt; ServiceSW1[Service SW S1101]     ScreenB --&gt; ServiceSW1     ServiceSW1 --&gt; Volume[Volume up/down]     Volume --&gt; AdjustLowlight1[ADJUST LOWLIGHT]     AdjustLowlight1 --&gt; WhiteLine[White line on screen after the R,G,B lowlight adjustment.]     WhiteLine --&gt; ServiceSW2[Service SW S1101]     ServiceSW2 --&gt; FullScan2[FULL SCAN]     FullScan2 --&gt; Repeat[Repeat for the remaining colour.]     Repeat --&gt; RepeatNote[Repeat the procedure if necessary to improve white balance of the collapsed field line.]     RepeatNote --&gt; ServiceSW3[Service SW S1101]     ServiceSW3 --&gt; FullScan3[FULL SCAN]     FullScan3 --&gt; Normal1[Normal S1107]     Normal1 --&gt; NormalMode1[NORMAL MODE]     NormalMode1 --&gt; NormaliseContrast[Normalise Contrast]     NormaliseContrast --&gt; ServiceSW4[Service SW S1101 TWICE]     ServiceSW4 --&gt; SelectR2[Function S1103 to select R]     ServiceSW4 --&gt; SelectB2[Function S1103 to select B]     SelectR2 --&gt; Volume2[Volume up/down]     SelectB2 --&gt; Volume2     Volume2 --&gt; AdjustLowlight2[ADJUST LOWLIGHT]     AdjustLowlight2 --&gt; UniformWhite[UNIFORM WHITE]     UniformWhite --&gt; Normal2[Normal S1107]     Normal2 --&gt; NormalMode2[NORMAL MODE] </pre> |
| <b>R, B HIGH LIGHT ADJUSTMENT</b>   |   |

*Before Colour Purity, Convergence and White Balance adjustments are attempted, V. Height, H. Centre and Focus adjustments must be completed.*

### Colour Purity

1. Set the Brightness and Contrast controls to their maximum positions.
2. Operate the TV set for 30 minutes.
3. Fully degauss the picture tube by using an external degaussing coil.
4. Apply a crosshatch pattern signal and adjust the static convergence magnets to the approximately correct position.
5. Receive a black and white signal.
6. Set the controls as following :  
 Red ..... minimum  
 Green ..... maximum  
 Blue ..... minimum  
 Push the Service Switch ( S1101 ) twice to select CRT Adjustment Mode and then the Function button ( S1103 ) as per Fig. 17 to select low lights.
7. Loosen the clamp screw for the deflection yoke A in Fig. 25 and move the deflection yoke as close to the purity magnet as possible.
8. Adjust the purity magnetic rings so that a vertical green field is obtained at the centre of the screen.

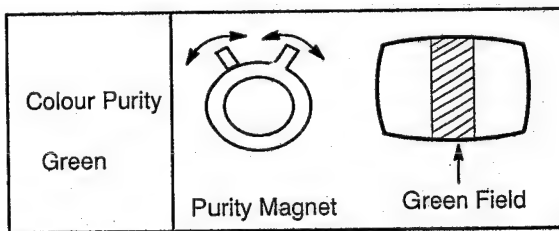


Fig. 21

9. Slowly push the deflection yoke and set it where a uniform green field is obtained.

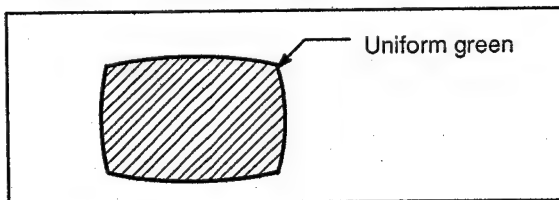


Fig. 22

10. Re-adjust the Low Light controls to their correct settings and make sure that a uniform white field is obtained.
11. Tighten the clamp screw A in Fig. 25.

### Convergence

1. Apply a crosshatch pattern signal and Normalise Contrast control to the maximum position.
2. Adjust Brightness until the grey portion of the crosshatch pattern just becomes black.
3. Adjust the Red and Blue line at the centre of the screen by rotating the R-B static convergence magnetic rings.

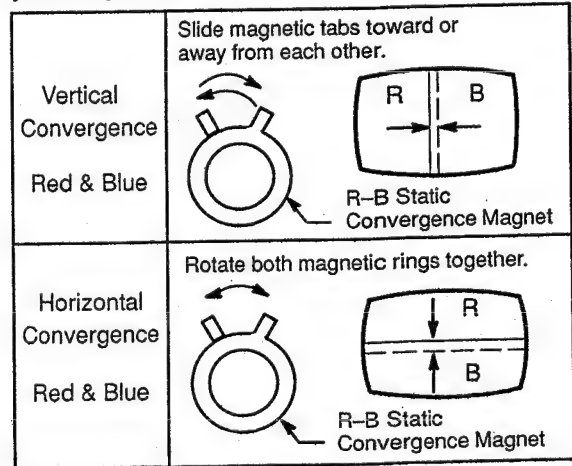


Fig. 23

4. Adjust Red and Blue with the Green line at centre of the screen by rotating ( RB ) – G static convergence magnetic rings.
5. Lock convergence magnets with silicone sealer.
6. Remove the DY wedges and slightly tilt the deflection yoke vertically and horizontally to obtain the good overall convergence.

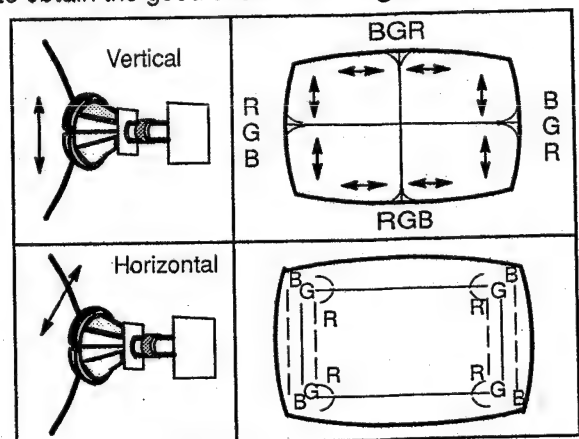


Fig. 24

7. Fix the deflection yoke by re-inserting the DY wedges. Refer to Fig. 25.
8. If purity error is found, repeat "Colour Purity" adjustment.

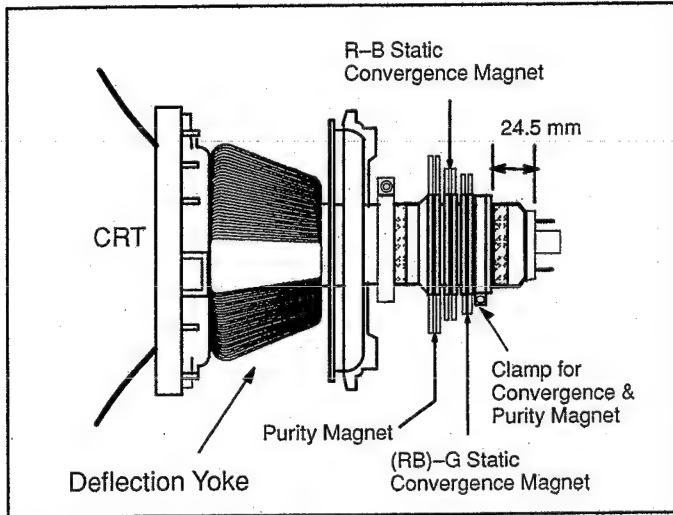


Fig. 24

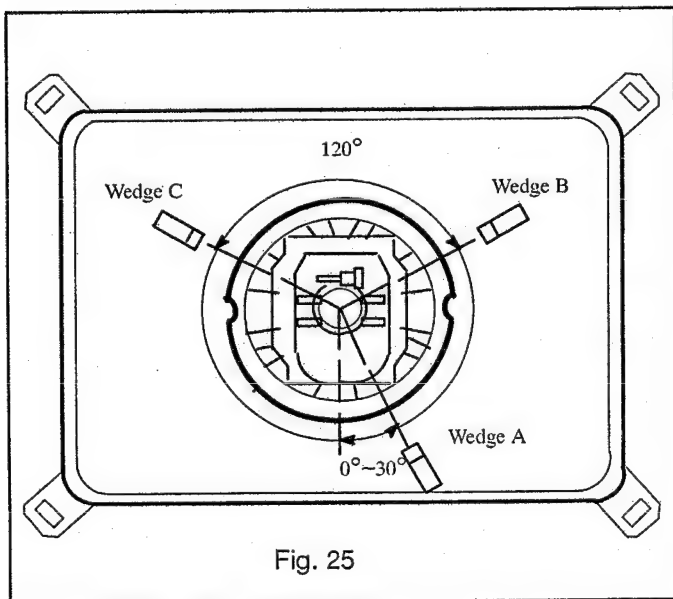


Fig. 25

**Notes :**

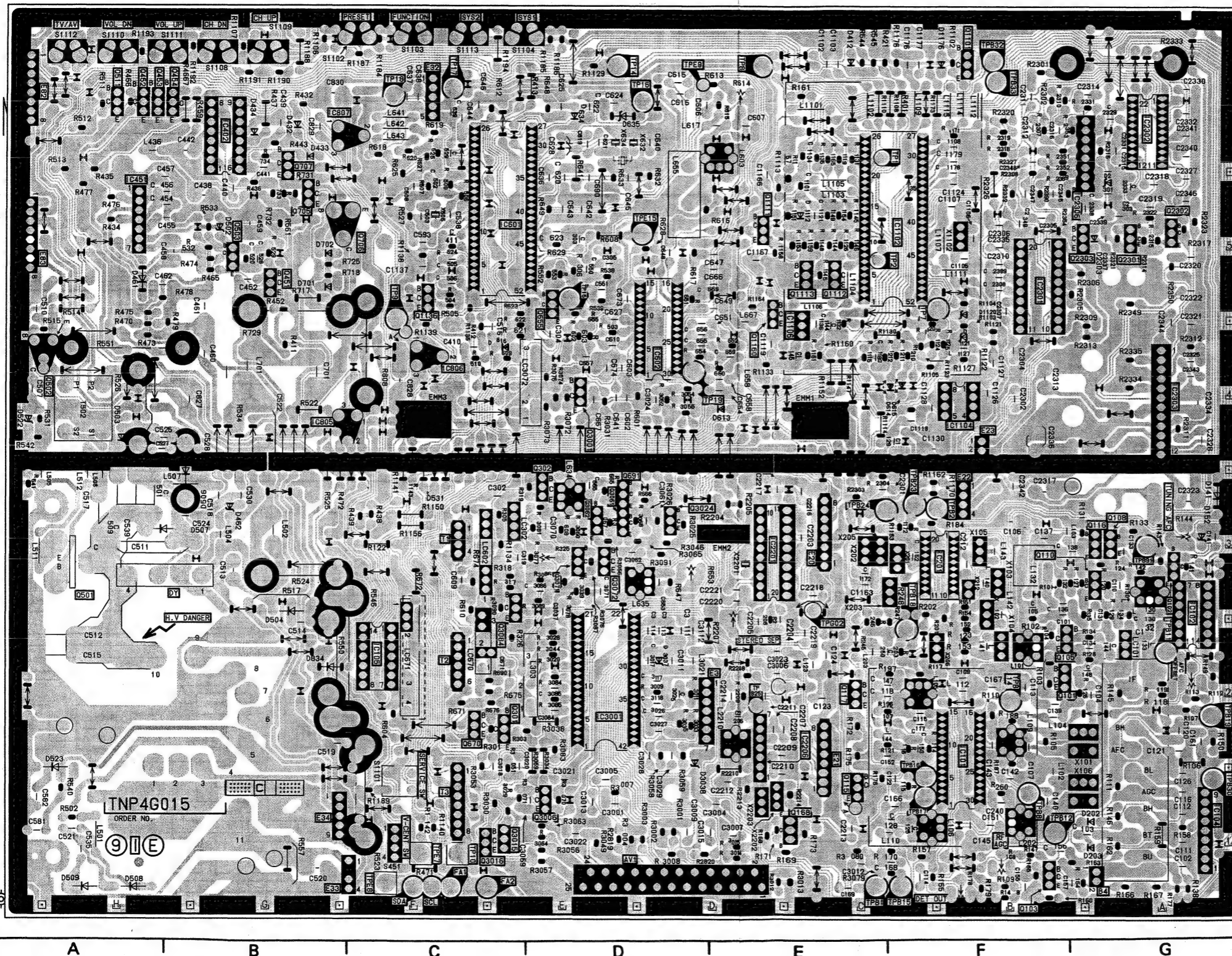
1. Wedge A shown in Fig. 25 should be fixed within a range of 0°~30 ° to the right of the vertical line as shown.
2. After inserting wedge A, insert wedges B and C. The wedges should be set 120° apart from each other.
3. Be certain that the four wedges are firmly fixed and the Deflection Yoke is tightly clamped in place. Otherwise the Deflection Yoke may shift its position and cause a loss of convergence and purity.

# CONDUCTOR VIEWS E-BOARD TNP4G015BA

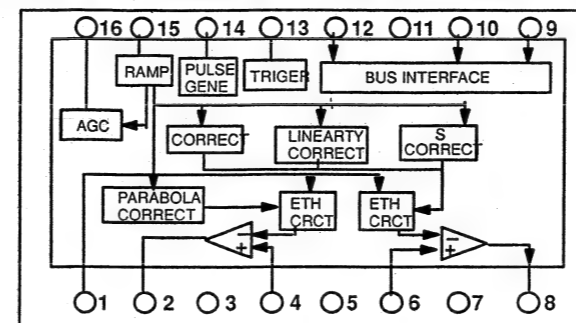
## PARTS LOCATION

| E-BOARD     |    |
|-------------|----|
| IC          |    |
| IC451       | A5 |
| IC402       | B5 |
| IC105       | C2 |
| IC805       | C3 |
| IC806       | C4 |
| IC807       | C5 |
| IC3001      | D2 |
| IC601       | C5 |
| IC602       | D4 |
| IC2206      | E2 |
| IC2201      | E3 |
| IC1106      | E4 |
| IC101       | F2 |
| IC201       | F3 |
| IC-1104     | F3 |
| IC1102      | F4 |
| IC2301      | F4 |
| IC104       | G1 |
| IC102       | G2 |
| IC2303      | G4 |
| IC2306      | G5 |
| IC2302      | G5 |
| TRANSISTORS |    |
| Q501        | A2 |
| Q502        | A4 |
| Q511        | A5 |
| Q452        | A5 |
| Q453        | A5 |
| Q454        | A5 |
| Q503        | B4 |
| Q451        | B4 |
| Q707        | B5 |
| Q705        | B5 |
| Q706        | B5 |
| Q1136       | C4 |
| Q3016       | C1 |
| Q3015       | C1 |
| Q670        | C2 |
| Q301        | C2 |
| Q3084       | C2 |
| Q3006       | D1 |
| Q3071       | D3 |
| Q3072       | D3 |
| Q3062       | D3 |
| Q3061       | D3 |
| Q302        | D3 |
| Q691        | D3 |
| Q3024       | D3 |
| Q168        | E1 |
| Q115        | E1 |
| Q117        | E2 |
| Q1160       | E4 |
| Q1113       | E4 |
| Q1112       | E4 |
| Q1111       | E4 |
| Q103        | F1 |
| Q101        | F2 |
| Q105        | F2 |
| Q1101       | F5 |
| Q108        | G3 |
| Q116        | G3 |
| Q2303       | G4 |
| Q2301       | G4 |
| Q2302       | G5 |
| Q102        | G3 |

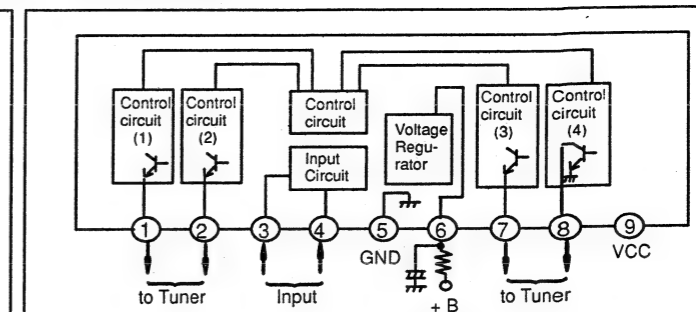
| Test points |    |
|-------------|----|
| TPE4        | B2 |
| TPE8        | C1 |
| TP9         | C4 |
| TP18        | C5 |
| TP17        | C5 |
| TP15        | D4 |
| TP19        | D4 |
| TPE14       | D5 |
| TPE15       | D4 |
| TP825       | E2 |
| TPB1        | E1 |
| TPG02       | E2 |
| TPB24       | E3 |
| TP2         | E5 |
| TP1         | E4 |
| TPB15       | F1 |
| TPB17       | F1 |
| TPB16       | F2 |
| TPB18       | F2 |
| TPB23       | F3 |
| TPB2        | F3 |
| TP7         | F4 |
| TPB12       | F1 |
| TPB8        | F1 |
| TPB14       | F2 |
| TPB32       | F5 |
| TPB33       | F6 |
| TPB30       | G1 |
| TPB19       | G2 |
| TPB11       | G2 |
| TPB91       | G3 |



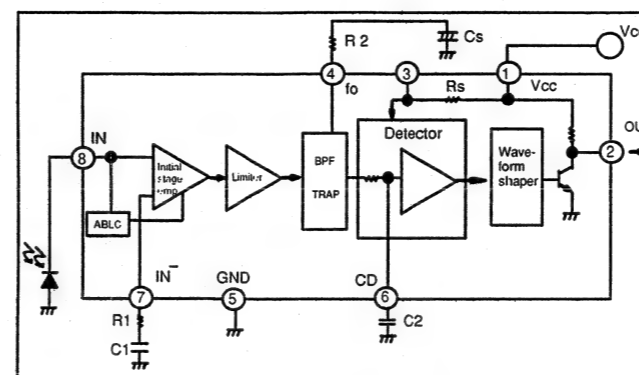
Block Diagram for Integrated Circuits



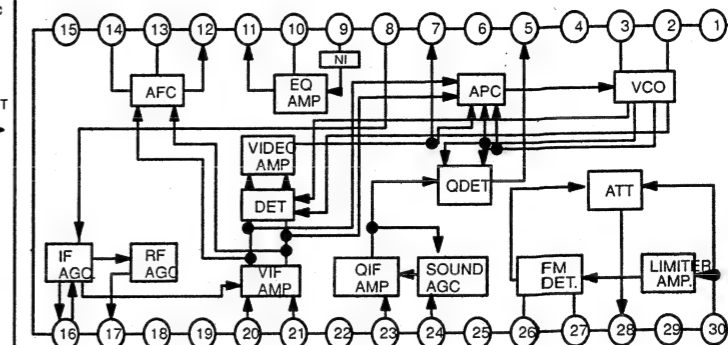
IC402 ( TA 8859P )



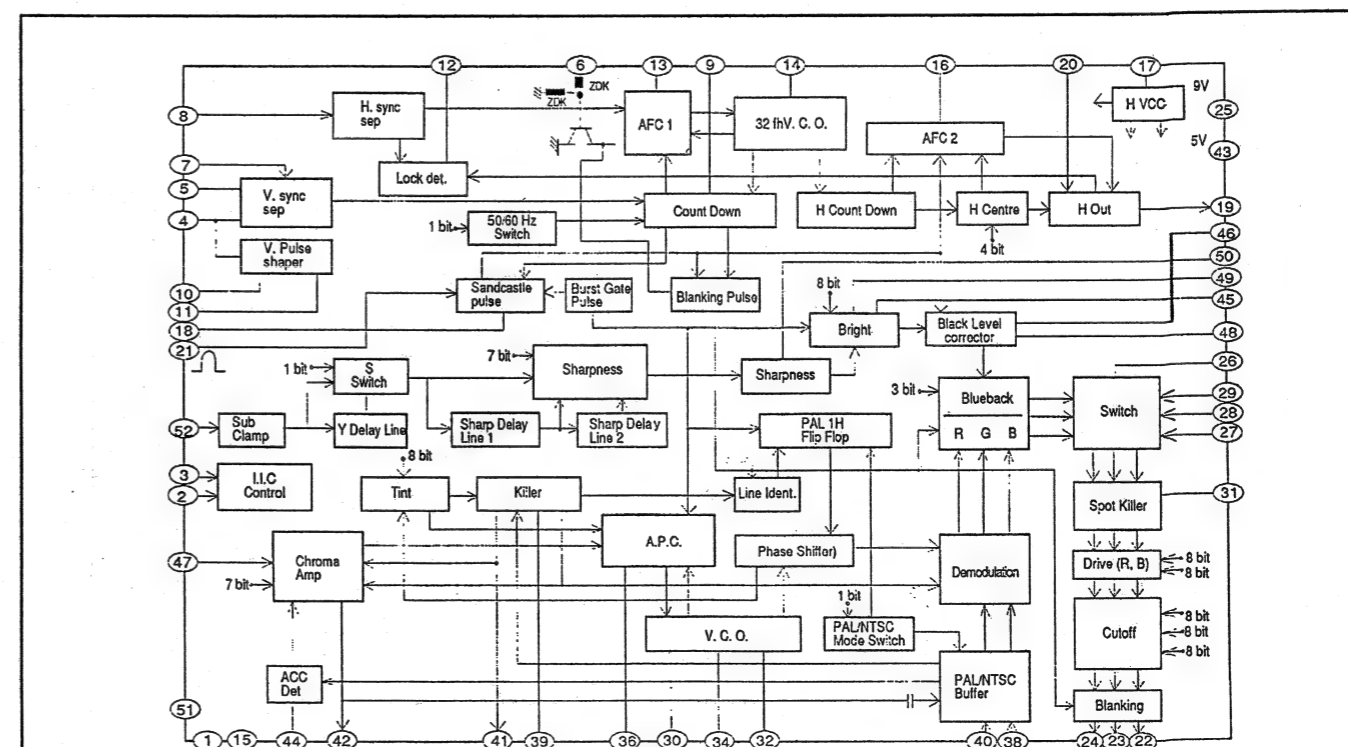
IC1103 ( AN5071 )



IC1201 ( UPC2801AHA )



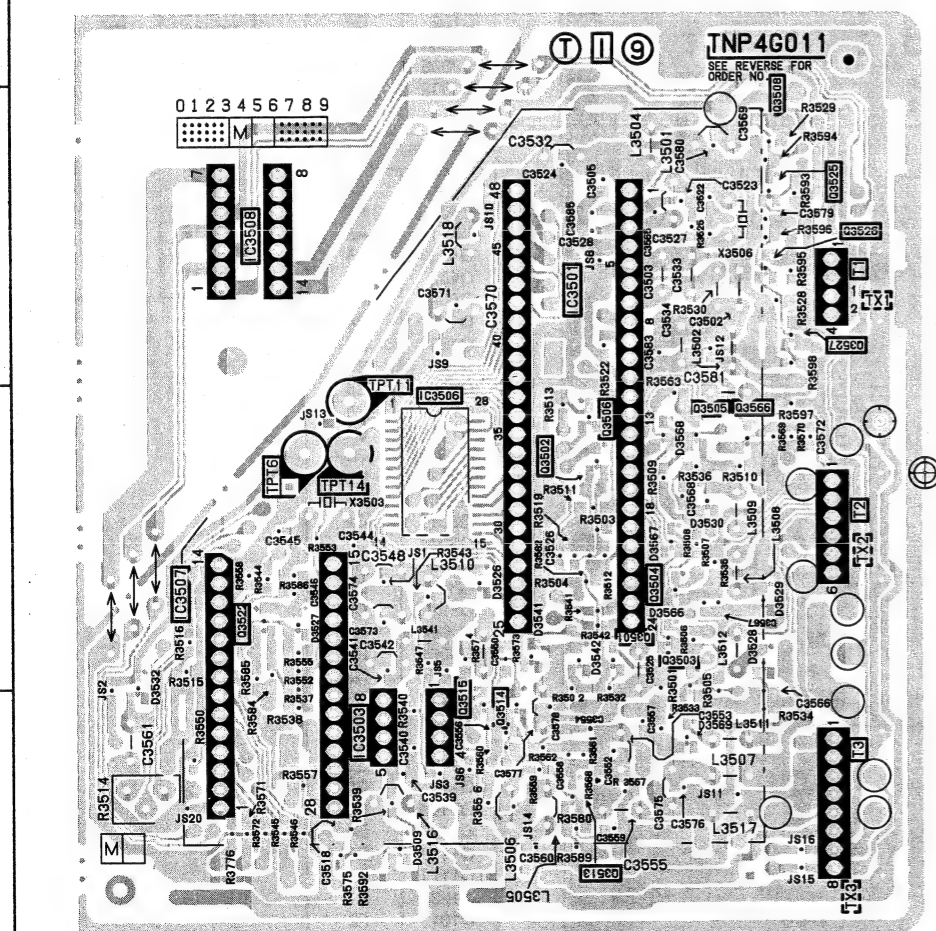
IC101 ( AN5179NK )



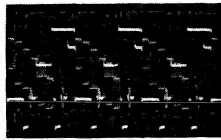
IC601 ( AN5607K )

PARTS LOCATION

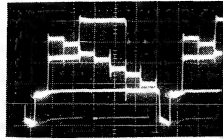
| T-BOARD    |    |
|------------|----|
| IC         |    |
| IC3507     | A1 |
| IC3503     | B1 |
| IC3501     | B2 |
| IC3506     | B2 |
| TRANSISTOR |    |
| Q3522      | A2 |
| Q3515      | B1 |
| Q3502      | B2 |
| Q3506      | B2 |
| Q3513      | B1 |
| Q3504      | B2 |
| Q3501      | B2 |
| Q3503      | B1 |
| Q3505      | C2 |
| Q3566      | C2 |
| Q3508      | C3 |
| Q3525      | C3 |
| Q3526      | C3 |
| Q3527      | C3 |
| TEST POINT |    |
| TPT6       | A2 |
| TPT14      | A2 |
| TPT11      | A2 |



# TEST POINT WAVEFORMS



1. IC101 Pin 20 (E-PCB)  
Composite Video Signal  
1.44V, 20 $\mu$ s / Div



2. IC601 Pin 52 (E-PCB)  
Y In  
0.2V, 10 $\mu$ s / Div



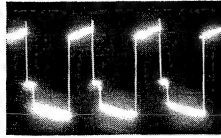
3. IC601 Pin 47 (E-PCB)  
Chroma In  
0.39V, 20 $\mu$ s / Div



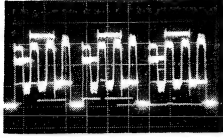
4. IC601 Pin 40 (E-PCB)  
B - Y In  
0.22V, 20 $\mu$ s / Div



5. IC601 Pin 38 (E-PCB)  
R - Y In  
0.33V, 20 $\mu$ s / Div



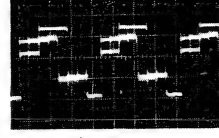
6. IC601 Pin 19 (E-PCB)  
Horizontal Out  
2.7V, 20 $\mu$ s / Div



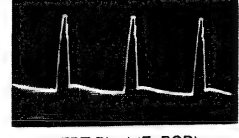
7. TP 18 (IC601 PIN 22)  
(E-PCB)  
5.8V, 20 $\mu$ s / Div



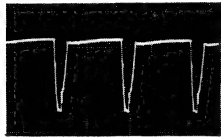
8. TP 17 (IC601 PIN 24)  
(E-PCB)  
5.8V, 10 $\mu$ s / Div



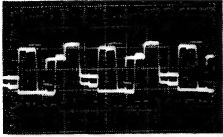
9. E-32 (E-PCB)  
Green Output From IC601 Pin 3.  
5.2V, 20 $\mu$ s / Div



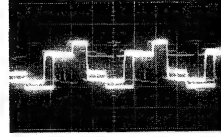
10. FBT Pin 4 (E-PCB)  
220V, 20 $\mu$ s / Div



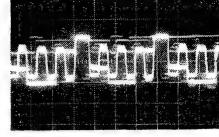
11. FBT Pin 6 (E-PCB)  
210V, 20 $\mu$ s / Div



12. Q351 Collector  
(Y-PCB)  
160V, 20 $\mu$ s / Div



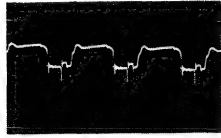
13. Q352 Collector  
(Y-PCB)  
148V, 20 $\mu$ s / Div



14. Q354 Collector  
(Y-PCB)  
160V, 20 $\mu$ s / Div



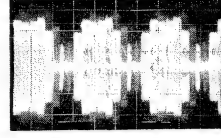
15. IC451 PIN 2 (E-PCB)  
Vertical Out  
52V, 5ms / Div



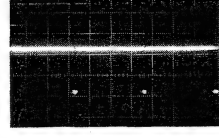
16. Q501 Base (E-PCB)  
Horizontal Out  
22V, 50 $\mu$ s / Div



17. Q501 Collector (E-PCB)  
Horizontal Out  
1100V, 20 $\mu$ s / Div



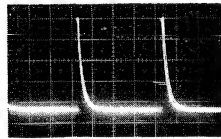
18. IC601 Pin 42 (E-PCB)  
Chroma Out  
1.4V, 20 $\mu$ s / Div



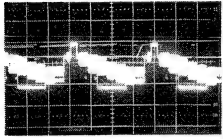
19. IC601 Pin 9 (E-PCB)  
Vertical Out  
4.3V, 10ms / Div



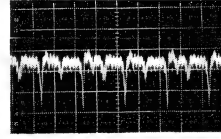
20. TPH 10 (E-PCB)  
Video Output Terminal  
2.2V, 10 $\mu$ s / Div



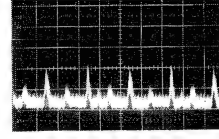
21. IC601 Pin 11 (E-PCB)  
V Shaper  
9.0V, 10ms / Div



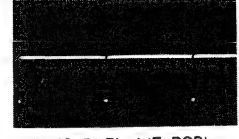
22. IC601 Pin 7 (E-PCB)  
Vertical  
2.4V, 10 $\mu$ s / Div



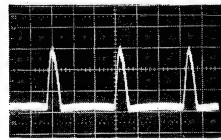
23. IC1102 Pin 31 (E-PCB)  
Band 1  
180mV, 2 $\mu$ s / Div



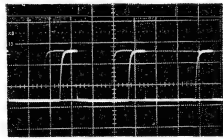
24. IC1102 Pin 24 (E-PCB)  
Band 2  
195mV, 0.5ms / Div



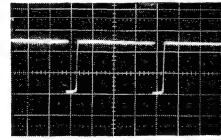
25. IC451 Pin 4 (E-PCB)  
Vertical Trigger Input  
8.7V, 5ms / Div



26. IC601 Pin 21 (E-PCB)  
4.1V, 20 $\mu$ s / Div



27. IC601 Pin 2 (E-PCB)  
Serial Clock Line  
5.0V, 20 $\mu$ s / Div




28. IC601 Pin 10 (E-PCB)  
50Hz / 60Hz  
5.1V, 5ms / Div

# TEST POINT VOLTAGES

| PART   | PIN | VOLTAGES | COMMENTS               | PART   | PIN | VOLTAGES | COMMENTS               |
|--------|-----|----------|------------------------|--------|-----|----------|------------------------|
| IC1102 | 4   | 0V       | AUTO, AV IN, NTSC 4.43 | IC1102 | 19  | 4.9V     | AUTO, AV IN, PAL       |
| IC1102 | 4   | 0V       | AUTO, AV IN, SECAM     | IC1102 | 19  | 4.9V     | B/W                    |
| IC1102 | 4   | 0V       | AUTO, AV IN, PAL       | IC1102 | 23  | 4.8V     | AUTO, AV IN, NTSC 4.43 |
| IC1102 | 4   | 0V       | B/W                    | IC1102 | 23  | 0V       | AUTO, AV IN, SECAM     |
| IC1102 | 17  | 4.7V     | AUTO, AV IN, NTSC 4.43 | IC1102 | 23  | 4.8V     | AUTO, AV IN, PAL       |
| IC1102 | 17  | 4.4V     | AUTO, AV IN, SECAM     | IC1102 | 23  | 4.8V     | B/W                    |
| IC1102 | 17  | 4.4V     | AUTO, AV IN, PAL       | IC1102 | 51  | 4.9V     | AUTO, AV IN, NTSC 4.43 |
| IC1102 | 17  | 4.4V     | B/W                    | IC1102 | 51  | 0.1V     | AUTO, AV IN, SECAM     |
| IC1102 | 19  | 4.9V     | AUTO, AV IN, NTSC 4.43 | IC1102 | 51  | 4.9V     | AUTO, AV IN, PAL       |
| IC1102 | 19  | 4.9V     | AUTO, AV IN, SECAM     | IC1102 | 51  | 4.9V     | B/W                    |

## Schematic Diagram for models TX-21GF10M/Z ( MX-2 Chassis )

## Important Safety Notice

Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts.

### Notes :

### 1. Resistor

All resistors are carbon 1/4W resistor, unless marked as follows :



Unit of resistance is OHM [ $\Omega$ ] ( K=1.000 , M=1.000.000 ).

|   |                |   |               |
|---|----------------|---|---------------|
|  | : Nonflammable |  | : Metal Oxide |
|  | : Solid        |  | : Metal Film  |
|  | : Wire Wound   |  | : Fuse        |

## 2. Capacitor

All capacitors are ceramic 50V capacitor, unless marked as follows :

Unit of capacitance is  $\mu\text{F}$ , unless otherwise noted.

|   |                            |  |                   |
|---|----------------------------|--|-------------------|
| ⊗ | : Temperature Compensation | +   | : Electrolytic    |
| Ⓜ | : Polyester                | NP  | : Bipolar         |
| Ⓜ | : Metalized Polyester      | Ⓣ  | : Dipped Tantalum |
| ⊗ | : Polypropylene            | Ⓩ  | : Z-Type          |

### 3. Coil

Unit of inductance is  $\mu\text{H}$ , unless otherwise noted.

#### 4. Test Point

○ : Test Point position

### 5. Earth Symbol

 : Chassis Earth ( Cold )       : Line Earth ( Hot )

## 6. Voltage Measurement

Voltage is measured by a DC voltmeter.

Conditions of the measurement are the following :

|                               |                          |
|-------------------------------|--------------------------|
| Power Source .....            | AC 220V, 50Hz            |
| Receiving Signal .....        | Colour Bar signal ( RF ) |
| All customer's controls ..... | Maximum positions        |

7. Number in red circle indicates waveform number.

( See waveform pattern table. )

8. When arrow mark (  ) is found, connection is easily found from the direction of arrow.

9.  : Indicates the major signal flow.

10. This schematic diagram is the latest at the time of printing and subject to change without notice.

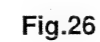
## Remarks :

1. The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection. The circuit is defined by HOT and COLD indications in the schematic diagram. Take the following precautions. All circuits, except the Power Circuit, are cold.

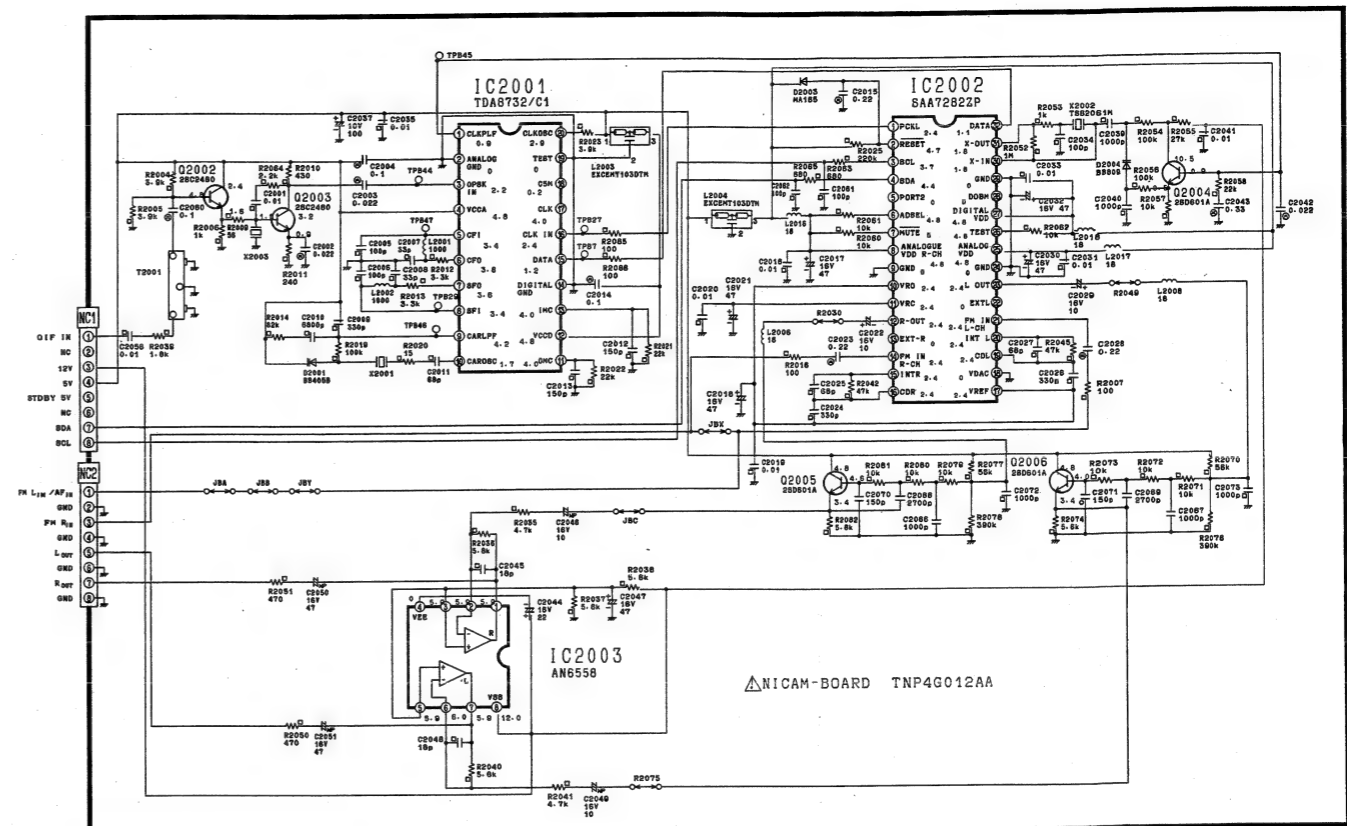
### Precautions

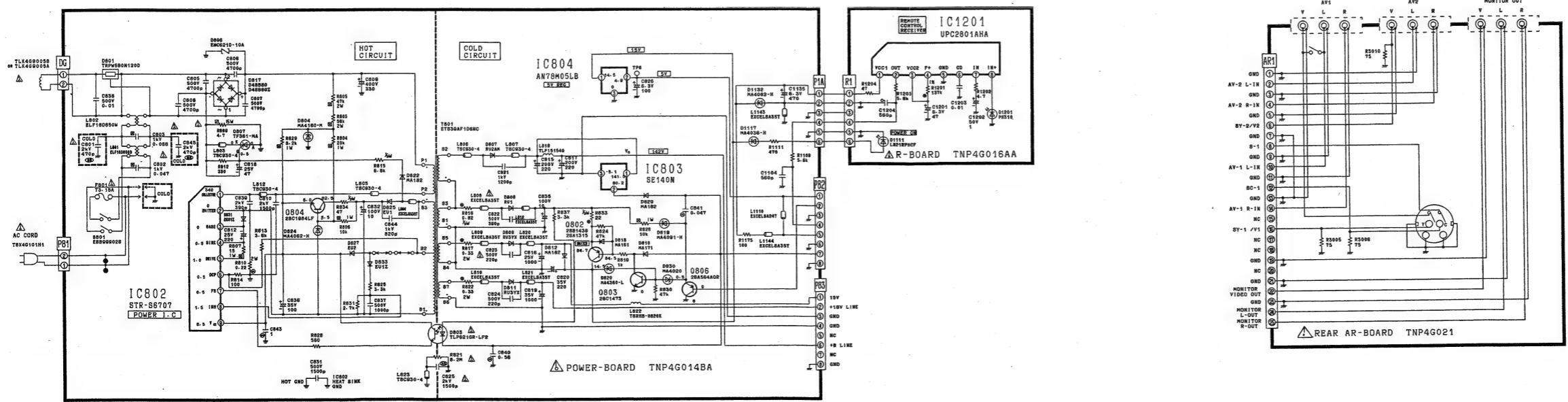
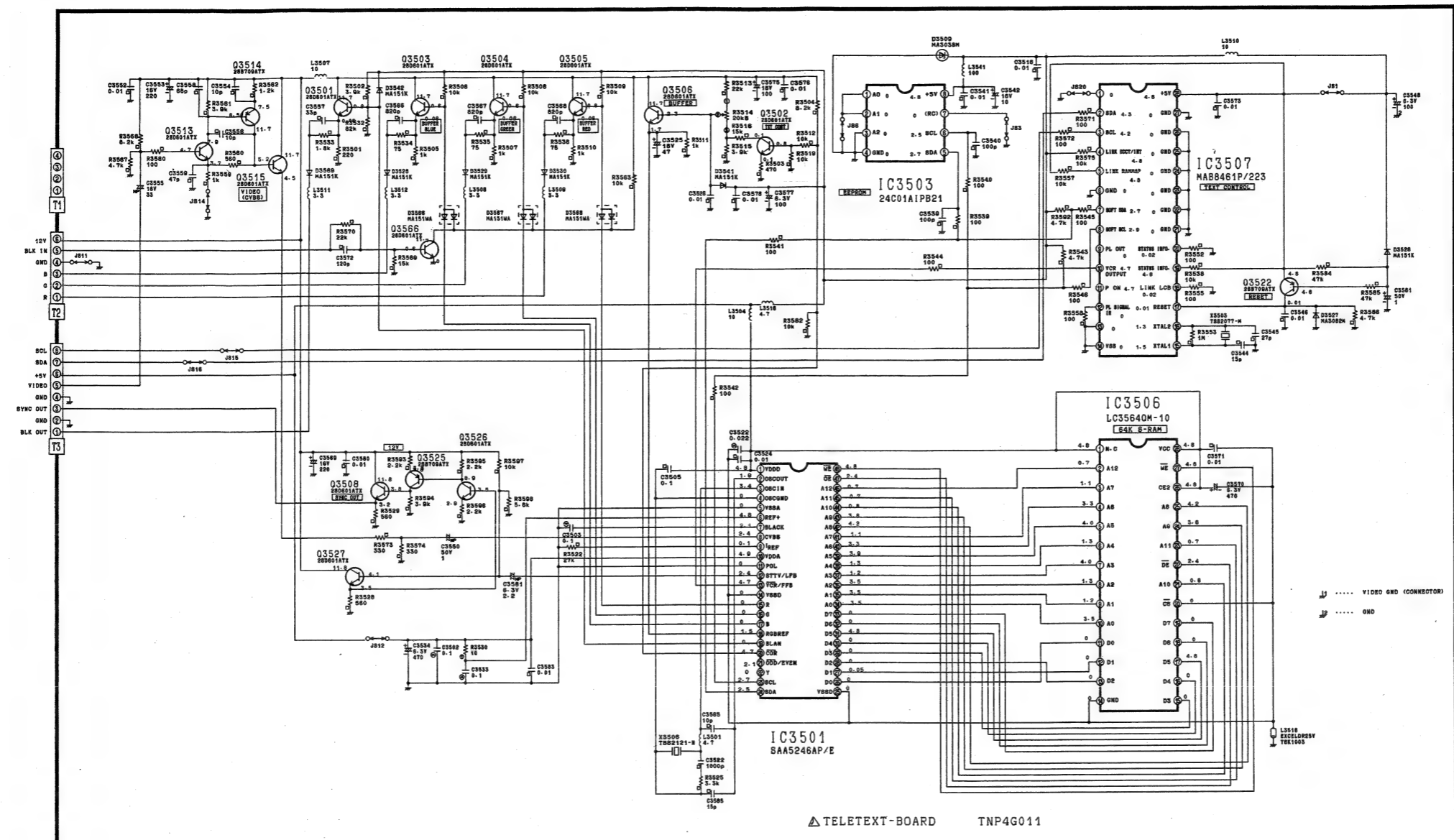
- Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
- Do not short-circuit the hot and cold circuits or a fuse may blow and parts may break.
- Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a fuse may blow. Connect the earth of instruments to the earth connection of the circuit being measured.
- Make sure to disconnect the power plug before removing the chassis.

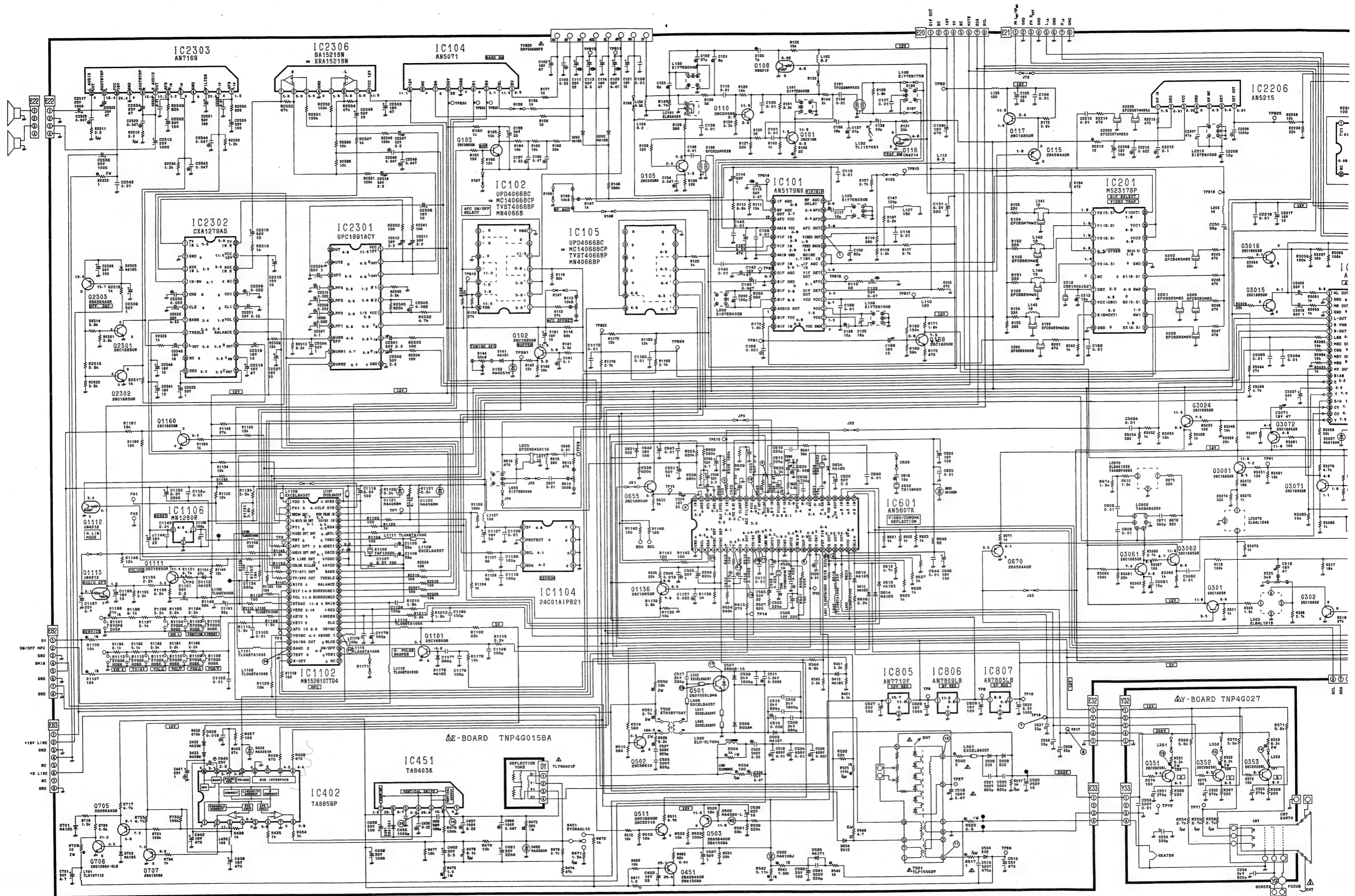
2. Following diodes are interchangeable.  
MA150 – MA162 ( Replacement part )

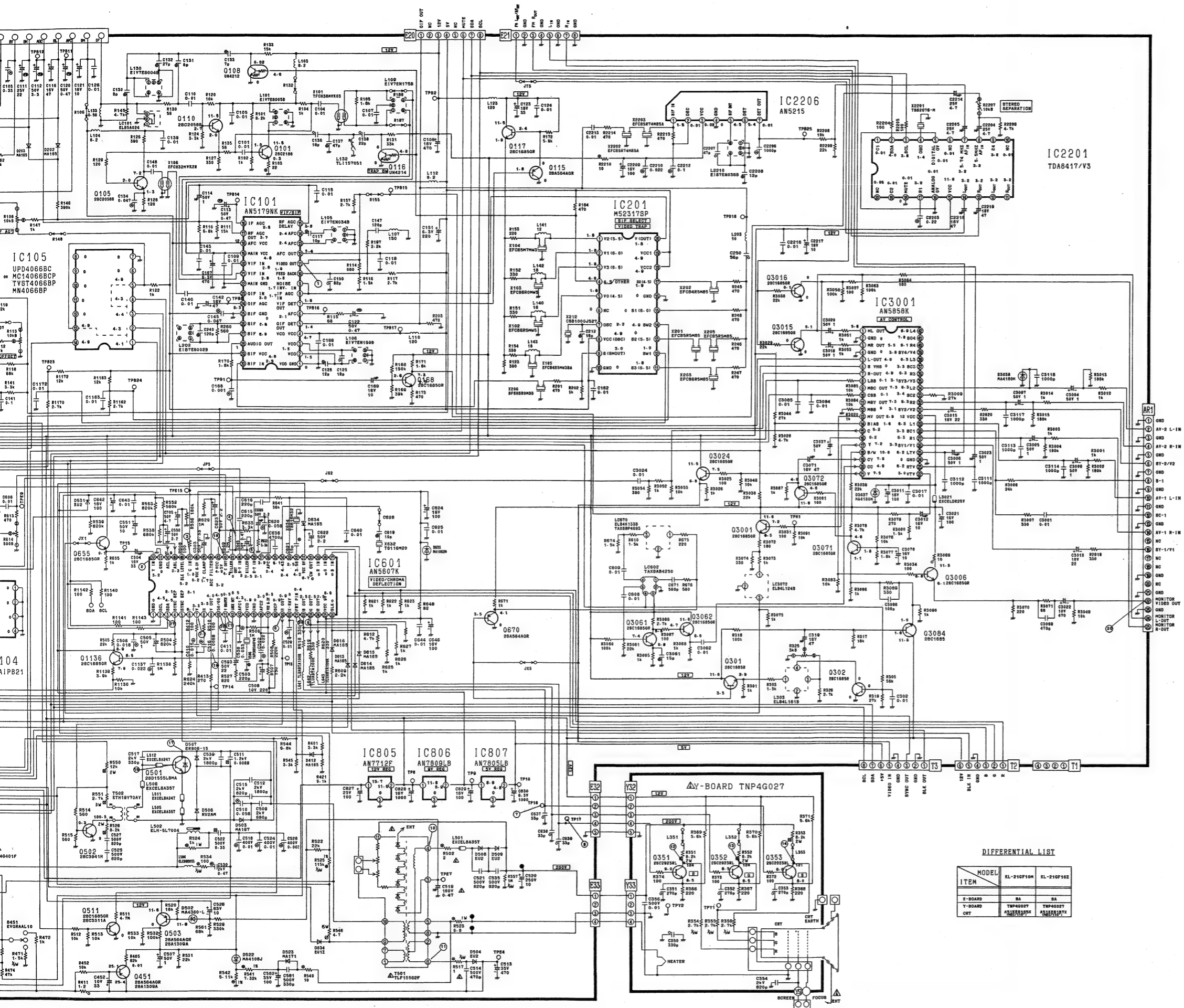


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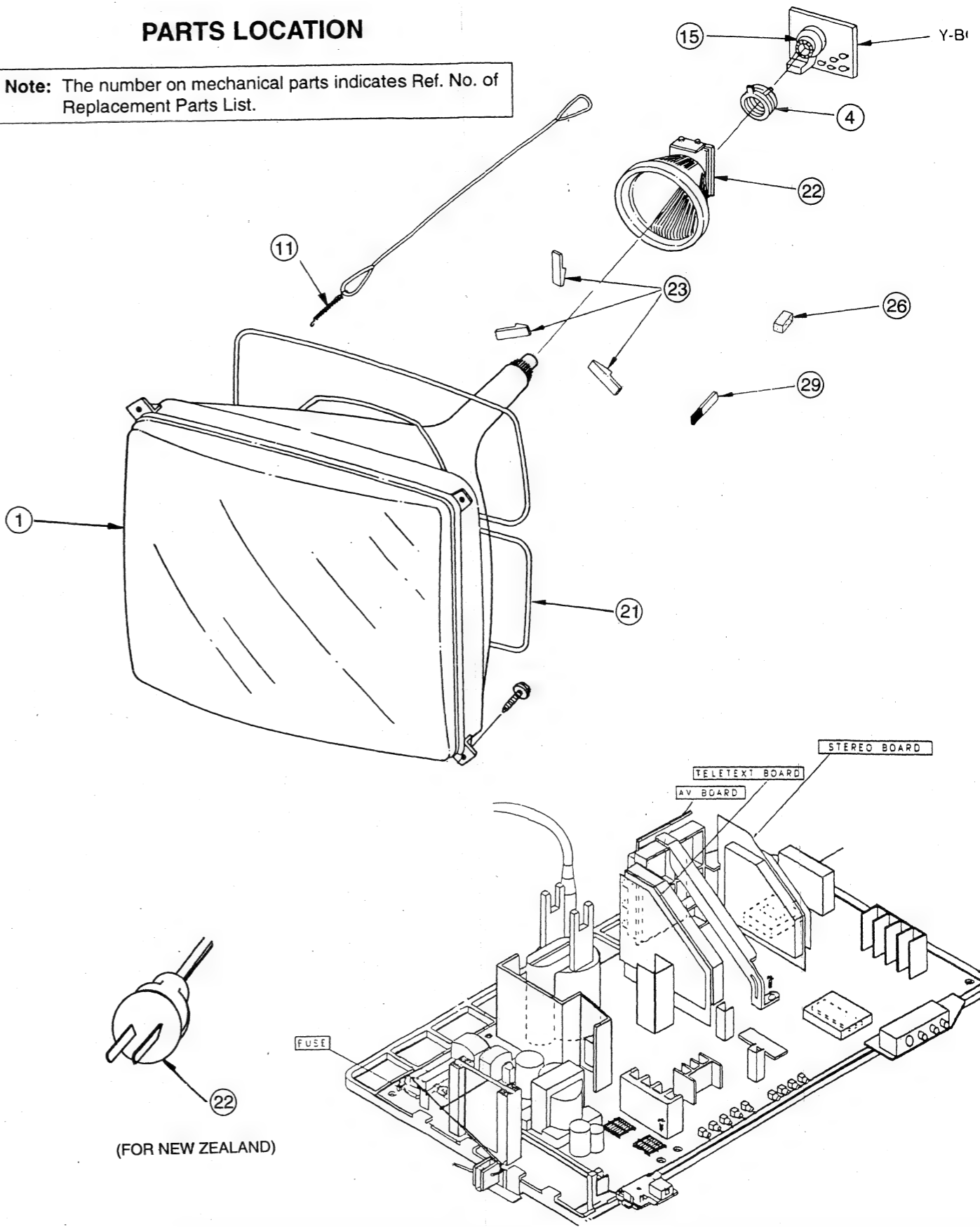
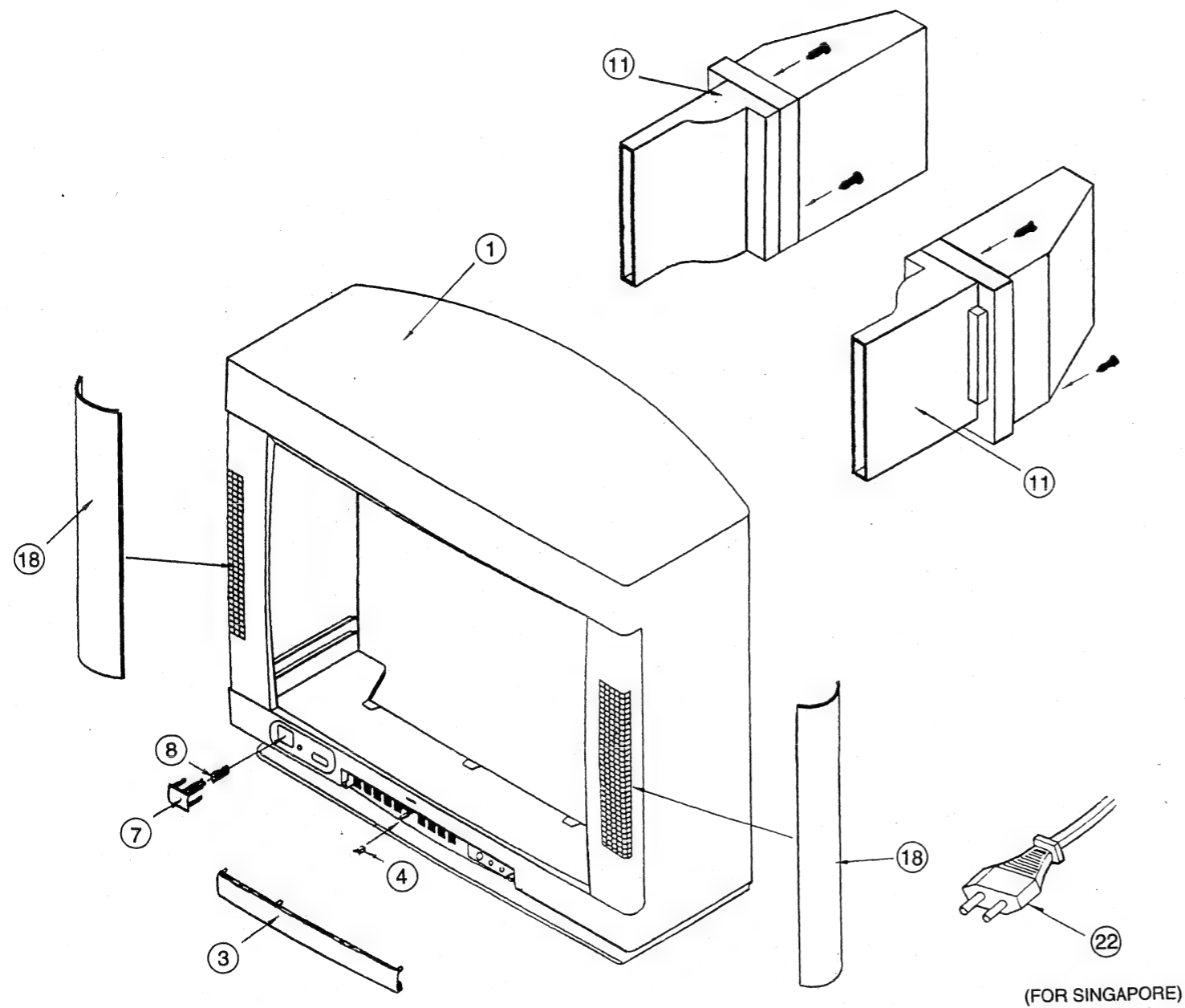






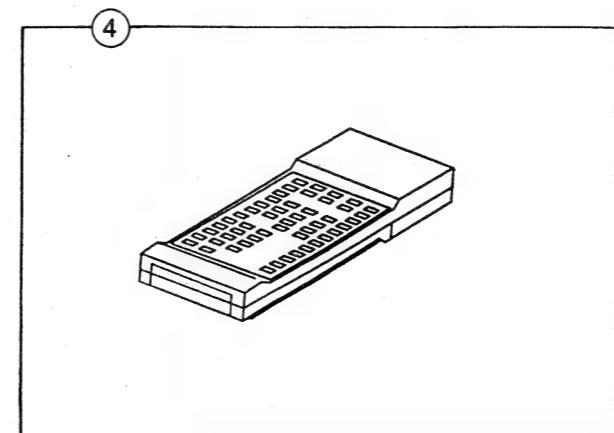
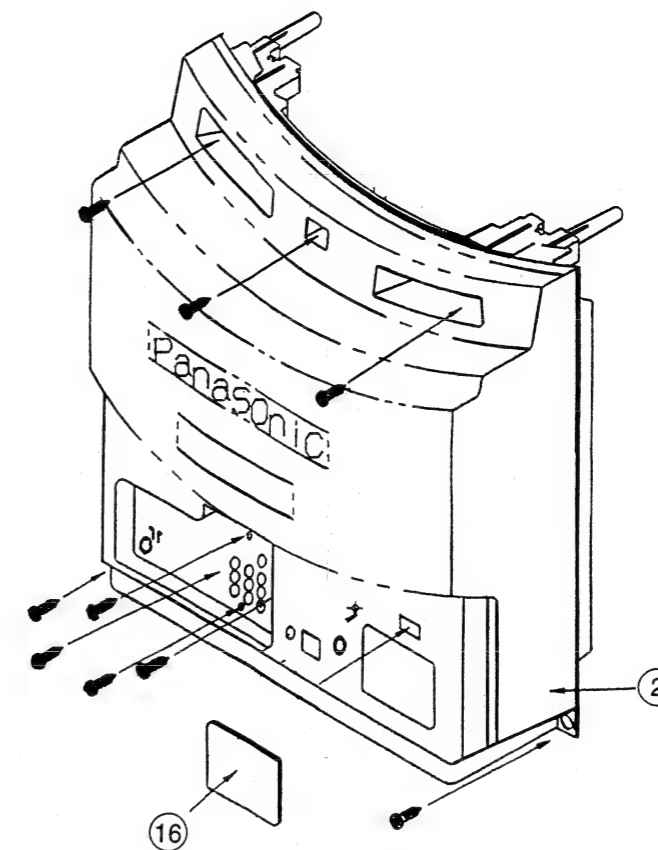
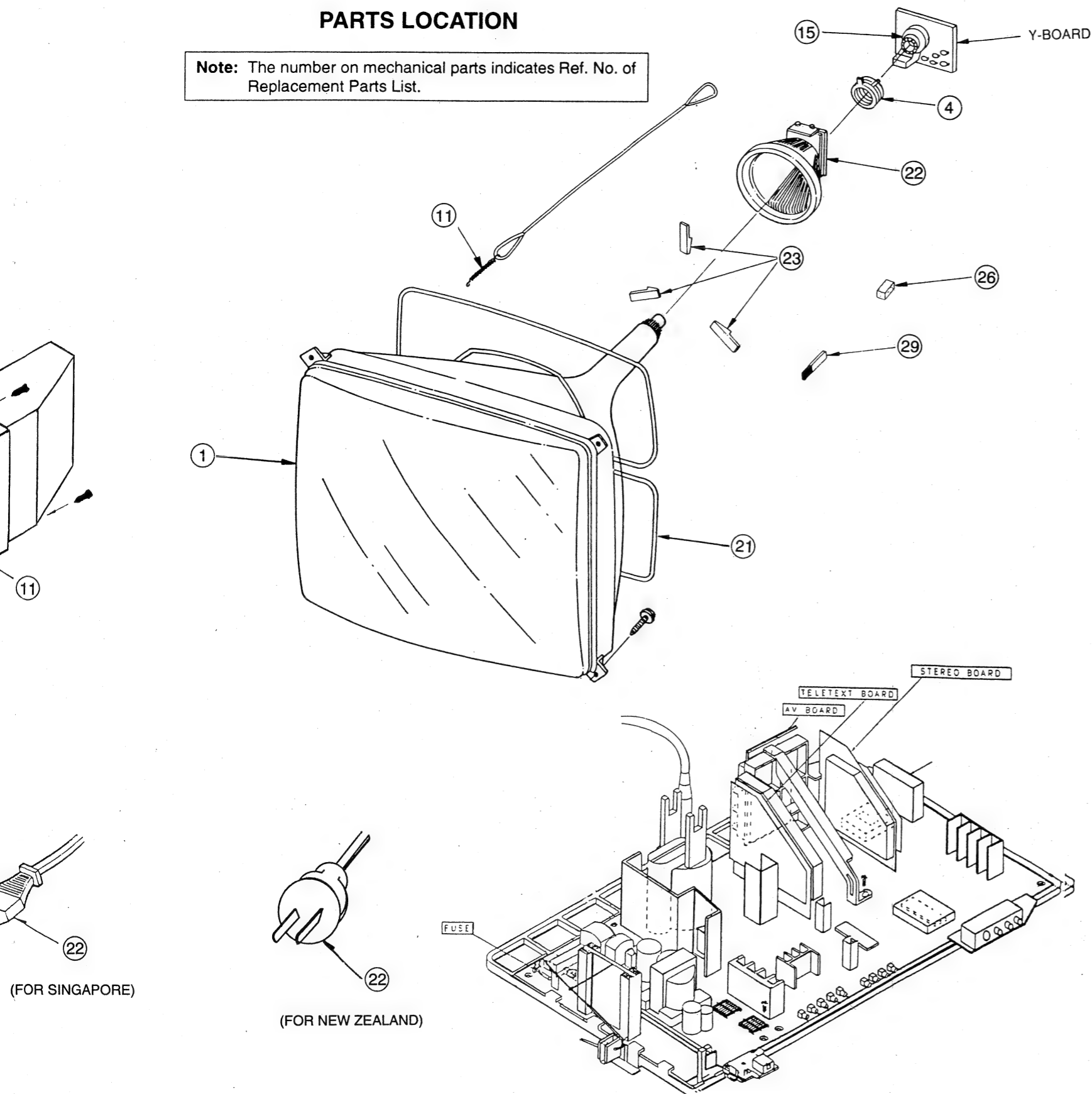
PARTS LOCATION

**Note:** The number on mechanical parts indicates Ref. No. of Replacement Parts List.



PARTS LOCATION

**Note:** The number on mechanical parts indicates Ref. No. of Replacement Parts List.



# Replacement Parts List

## Important Safety Notice

Components identified by  $\Delta$  mark have special characteristics important for safety.  
When replacing any of these components, use only manufacturer's specified parts.

**Note :** Printed circuit board assembly with mark "NLA" is no longer available after production discontinuation of the complete set.

Abbreviation of part name and description

### 1. Resistor

Example :

ERD25TJ104    C 100KOHM, J, 1/4W  
                                Type                      Allowance

| Type            | Allowance      |
|-----------------|----------------|
| C : Carbon      | F : $\pm 1\%$  |
| F : Fuse        | G : $\pm 2\%$  |
| M : Metal Oxide | J : $\pm 5\%$  |
| Metal Film      | K : $\pm 10\%$ |
| S : Solid       | M : $\pm 20\%$ |
| W : Wire Wound  |                |

### 2. Capacitor

Example :

ECKF1H103ZF    C 0.01UF,    Z, 50V  
                                Type                      Allowance

| Type             | Allowance               |
|------------------|-------------------------|
| C : Ceramic      | C : $\pm 0.25\text{pF}$ |
| E : Electrolytic | D : $\pm 0.5\text{pF}$  |
| P : Polyester    | F : $\pm 1\text{pF}$    |
| Polypropylene    | G : $\pm 3\%$           |
| T : Tantalum     | J : $\pm 5\%$           |
|                  | K : $\pm 10\%$          |
|                  | L : $\pm 15\%$          |
|                  | M : $\pm 20\%$          |
|                  | P : + 100%, - 0%        |
|                  | Z : + 80%, - 20%        |

# TX-21GF10M/Z

## Replacement Parts List

| Ref.No.                 | Part No.     | Description                        | Ref.No.          | Part No.     | Description                     |
|-------------------------|--------------|------------------------------------|------------------|--------------|---------------------------------|
| <b>MECHANICAL PARTS</b> |              |                                    |                  | TQB4G1085    | FAN BAG (TX-21GF10Z) MTV        |
| 1                       | A51KES165X   | PICTURE TUBE (TX-21GF10M) MTV△     | 21               | TSN63115-4   | PURITY MAGNET MTV               |
| 1                       | A51KES167X   | PICTURE TUBE (TX-21GF10Z) MTV△     | 22               | TSX4G102H1   | AC POWER CORD MTV△              |
| 2                       | EAB12129AG-1 | SPEAKER BOX MTV                    | 22               | TSX4G108H    | AC POWER CORD (TX-21GF10Z) MTV△ |
| 3                       | ENV59898F2   | TUNER MTV△                         | 23               | TXFKY01YK2S  | CABINET ASSY MTV                |
| 4                       | EUR641513    | REMOTE CTRL. TRAN. MTV△            | 24               | TXFMK01H55   | MAGNET                          |
| 5                       | TBM4G0075    | MODEL NAME PLATE (TX-21GF10M) MTV△ |                  | TXFPD02YK2S  | CUSHION (BOTTOM) MTV            |
| 5                       | TBM4G0076    | MODEL NAME PLATE (TX-21GF10Z) MTV△ | <b>RESISTORS</b> |              |                                 |
| 6                       | TBX4G80901   | POWER BUTTON MTV                   | R101             | ERDS2TJ822   | C 8.2KOHM, J, 1/4W              |
| 7                       | TEK6935      | DOOR SWITCH                        | R102             | ERDS2TJ102   | C 1KOHM, J, 1/4W                |
| 8                       | TES2273      | SPRING                             | R103             | ERQ14AJ220P  | F 22OHM, J, 1/4W △              |
| 9                       | TES4223      | SPRING                             | R104             | ERDS2TJ102   | C 1KOHM, J, 1/4W                |
| 10                      | TES4537      | SPRING                             | R105             | ERDS2TJ182   | C 1.8KOHM, J, 1/4W              |
| 11                      | TES6583      | SPRING FOR TR                      | R108             | EVND4AA00B14 | CONTROL 10KOHMB                 |
| 12                      | TJB4G603     | AV TERMINAL MTV                    | R110             | ERDS2TJ103   | C 10KOHM, J, 1/4W               |
| 13                      | TJS1A5081    | CRT SOCKET △                       | R111             | ERDS2TJ153   | C 15KOHM, J, 1/4W               |
| 14                      | TKP4G10141   | DOOR MTV                           | R112             | ERDS2TJ273   | C 27KOHM, J, 1/4W               |
| 15                      | TKP4G90013   | SP PUNCH. SHEET MTV                | R113             | EVND4AA00B14 | CONTROL 10KOHMB                 |
| 16                      | TKU4G1200-1  | BACK COVER ASSY MTV                | R114             | ERDS2TJ681   | C 680OHM, J, 1/4W               |
| 17                      | TLC2042-1    | CONVERGENCE YOKE                   | R115             | ERDS2TJ560   | C 56OHM, J, 1/4W                |
| 18                      | TLK4G9005S   | DEGAUSSING COIL MTV△               | R116             | ERDS2TJ152   | C 1.5KOHM, J, 1/4W              |
| 19                      | TLY4G401F    | DEFLECTION YOKE MTV△               | R117             | ERDS2TJ272   | C 2.7KOHM, J, 1/4W              |
| 20                      | TMM27523     | DY WEDGE                           | R118             | ERDS2TJ683   | C 68KOHM, J, 1/4W               |
| NLA                     | TNP4G011     | T BOARD MTV△                       | R119             | ERDS2TJ823   | C 82KOHM, J, 1/4W               |
| NLA                     | TNP4G012AA   | NC BOARD MTV△                      | R120             | ERDS2TJ103   | C 10KOHM, J, 1/4W               |
| NLA                     | TNP4G014     | P BOARD MTV△                       | R122             | ERD25TJ102   | C 1KOHM, J, 1/4W                |
| NLA                     | TNP4G015BA   | E BOARD MTV△                       | R123             | ERDS2TJ391   | C 390OHM, J, 1/4W               |
| NLA                     | TNP4G016     | R BOARD MTV△                       | R124             | ERDS2TJ332   | C 3.3KOHM, J, 1/4W              |
| NLA                     | TNP4G021     | RAV BOARD MTV△                     | R126             | ERDS2TJ391   | C 390OHM, J, 1/4W               |
| NLA                     | TNP4G027     | Y BOARD MTV△                       | R127             | ERDS2TJ331   | C 330OHM, J, 1/4W               |
|                         | TPC4G40901   | CARTON (TX-21GF10M) MTV            | R128             | ERDS2TJ121   | C 120OHM, J, 1/4W               |
|                         | TPC4G40902   | CARTON (TX-21GF10Z) MTV            | R129             | ERDS2TJ121   | C 120OHM, J, 1/4W               |
|                         | TPD4G1008    | CUSHION (TOP) MTV                  | R130             | ERDS2TJ560   | C 56OHM, J, 1/4W                |
|                         | TPE4G14002   | SET COVER MTV                      | R131             | ERDS2TJ333   | C 33KOHM, J, 1/4W               |
|                         | TPE4G14003   | LAMI BAG MTV                       | R133             | ERDS2TJ153   | C 15KOHM, J, 1/4W               |
|                         | TQB4G1084    | FAN BAG (TX-21GF10M) MTV           | R135             | ERDS2TJ560   | C 56OHM, J, 1/4W                |
|                         |              |                                    | R140             | ERDS2TJ123   | C 12KOHM, J, 1/4W               |
|                         |              |                                    | R141             | ERDS2TJ332   | C 3.3KOHM, J, 1/4W              |
|                         |              |                                    | R142             | ERDS2TJ103   | C 10KOHM, J, 1/4W               |
|                         |              |                                    | R143             | ERDS2TJ123   | C 12KOHM, J, 1/4W               |

| Ref.No. | Part No.     | Description        | Ref.No. | Part No.     | Description            |
|---------|--------------|--------------------|---------|--------------|------------------------|
| R144    | EVND4AA00B34 | CONTROL 30KOHMB    | R319    | ERDS2TJ273   | C 27KOHM, J, 1/4W      |
| R145    | ERDS2TJ472   | C 4.7KOHM, J, 1/4W | R325    | EVND4AA00B33 | CONTROL 3KOHMB         |
| R146    | ERDS2TJ394   | C 390KOHM, J, 1/4W | R326    | ERDS2TJ272   | C 2.7KOHM, J, 1/4W     |
| R147    | ERDS2TJ102   | C 1KOHM, J, 1/4W   | R351    | ERG2ANJ822   | M 8.2KOHM, J, 2W       |
| R149    | ERDS2TJ103   | C 10KOHM, J, 1/4W  | R352    | ERG2ANJ822   | M 8.2KOHM, J, 2W       |
| R150    | ERDS2TJ273   | C 27KOHM, J, 1/4W  | R353    | ERG2ANJ822   | M 8.2KOHM, J, 2W       |
| R151    | ERDS2TJ331   | C 330OHM, J, 1/4W  | R354    | ERDS1TJ272   | C 2.7KOHM, J, 1/2W     |
| R152    | ERDS2TJ331   | C 330OHM, J, 1/4W  | R355    | ERDS1TJ272   | C 2.7KOHM, J, 1/2W     |
| R153    | ERDS2TJ221   | C 220OHM, J, 1/4W  | R356    | ERDS1TJ272   | C 2.7KOHM, J, 1/2W     |
| R154    | ERDS2TJ331   | C 330OHM, J, 1/4W  | R366    | ERDS2TJ221   | C 220OHM, J, 1/4W      |
| R157    | ERDS2TJ272   | C 2.7KOHM, J, 1/4W | R367    | ERDS2TJ221   | C 220OHM, J, 1/4W      |
| R158    | ERDS2TJ100   | C 10OHM, J, 1/4W   | R368    | ERDS2TJ221   | C 220OHM, J, 1/4W      |
| R159    | ERD25TJ100   | C 10OHM, J, 1/4W   | R369    | ERDS2TJ562   | C 5.6KOHM, J, 1/4W     |
| R160    | ERDS2TJ102   | C 1KOHM, J, 1/4W   | R370    | ERDS2TJ562   | C 5.6KOHM, J, 1/4W     |
| R161    | ERDS2TJ151   | C 150OHM, J, 1/4W  | R371    | ERDS2TJ562   | C 5.6KOHM, J, 1/4W     |
| R162    | ERDS2TJ203   | C 20KOHM, J, 1/4W  | R372    | ERDS2TJ101   | C 100OHM, J, 1/4W      |
| R163    | ERDS2TJ103   | C 10KOHM, J, 1/4W  | R373    | ERDS2TJ101   | C 100OHM, J, 1/4W      |
| R164    | ERDS2TJ103   | C 10KOHM, J, 1/4W  | R374    | ERDS2TJ101   | C 100OHM, J, 1/4W      |
| R165    | ERDS2TJ103   | C 10KOHM, J, 1/4W  | R401    | ERD25TJ332   | C 3.3KOHM, J, 1/4W     |
| R166    | ERDS2TJ123   | C 12KOHM, J, 1/4W  | R411    | ERD2FAVJ1R2W | C 1.2OHM, J, 1/4W      |
| R168    | ERDS2TJ154   | C 150KOHM, J, 1/4W | R412    | ERDS2TJ101   | C 100OHM, J, 1/4W      |
| R169    | ERDS2TJ393   | C 39KOHM, J, 1/4W  | R413    | ERD25TJ271   | C 270OHM, J, 1/4W      |
| R170    | ERDS2TJ182   | C 1.8KOHM, J, 1/4W | R421    | ERDS2TJ912   | C 9.1KOHM, J, 1/4W     |
| R171    | ERDS2TJ182   | C 1.8KOHM, J, 1/4W | R432    | ERDS2TJ474   | C 470KOHM, J, 1/4W     |
| R172    | ERDS2TJ562   | C 5.6KOHM, J, 1/4W | R434    | ERDS2TJ102   | C 1KOHM, J, 1/4W       |
| R173    | ERDS2TJ471   | C 470OHM, J, 1/4W  | R435    | ERDS2TJ102   | C 1KOHM, J, 1/4W       |
| R177    | ERDS2TJ100   | C 10OHM, J, 1/4W   | R436    | ERDS2TJ102   | C 1KOHM, J, 1/4W       |
| R184    | ERDS2TJ471   | C 470OHM, J, 1/4W  | R437    | ERD25TJ101   | C 100OHM, J, 1/4W      |
| R197    | ERDS2TJ222   | C 2.2KOHM, J, 1/4W | R438    | ERDS2TJ471   | C 470OHM, J, 1/4W      |
| R201    | ERDS2TJ471   | C 470OHM, J, 1/4W  | R439    | ERDS2TJ471   | C 470OHM, J, 1/4W      |
| R202    | ERDS2TJ102   | C 1KOHM, J, 1/4W   | R443    | ERDS2TJ273   | C 27KOHM, J, 1/4W      |
| R203    | ERDS2TJ471   | C 470OHM, J, 1/4W  | R452    | ERDS2TJ103   | C 10KOHM, J, 1/4W      |
| R245    | ERDS2TJ471   | C 470OHM, J, 1/4W  | R465    | ERDS2TJ823   | C 82KOHM, J, 1/4W      |
| R246    | ERDS2TJ471   | C 470OHM, J, 1/4W  | R470    | ERDS2TJ153   | C 15KOHM, J, 1/4W      |
| R247    | ERDS2TJ471   | C 470OHM, J, 1/4W  | R471    | ERDS1TJ152   | C 1.5KOHM, J, 1/2W     |
| R248    | ERD25TJ471   | C 470OHM, J, 1/4W  | R472    | ERD25TJ102   | C 1KOHM, J, 1/4W       |
| R260    | ERDS2TJ561   | C 560OHM, J, 1/4W  | R473    | ERG1SJ221P   | M 220OHM, J, 1W        |
| R301    | ERDS2TJ102   | C 1KOHM, J, 1/4W   | R474    | ERDS2TJ473   | C 47KOHM, J, 1/4W      |
| R303    | ERDS2TJ152   | C 1.5KOHM, J, 1/4W | R475    | ERX1SJ1R5P   | M 1.5OHM, J, 1W        |
| R305    | ERDS2TJ563   | C 56KOHM, J, 1/4W  | R476    | ERDS2TJ104   | C 100KOHM, J, 1/4W     |
| R306    | ERDS2TJ184   | C 180KOHM, J, 1/4W | R477    | ERDS2TJ123   | C 12KOHM, J, 1/4W      |
| R317    | ERDS2TJ183   | C 18KOHM, J, 1/4W  | R478    | ERDS1VJ912T  | C 9.1KOHM, J, 1/2W MTV |
| R318    | ERDS2TJ104   | C 100KOHM, J, 1/4W | R479    | ERDS2TJ272   | C 2.7KOHM, J, 1/4W     |

# TX-21GF10M/Z

| Ref.No. | Part No.     | Description                | Ref.No. | Part No.     | Description             |
|---------|--------------|----------------------------|---------|--------------|-------------------------|
| R502    | ERQ14AJ2R0P  | F 2.0OHM, J, 1/4W $\Delta$ | R613    | ERDS2TJ471   | C 470OHM, J, 1/4W       |
| R504    | ERDS2TJ824   | C 820KOHM, J, 1/4W         | R614    | EVND4AA00B52 | CONTROL 500OHMB         |
| R505    | ERDS2TJ333   | C 33KOHM, J, 1/4W          | R615    | ERDS2TJ391   | C 390OHM, J, 1/4W       |
| R506    | ERDS2TJ105   | C 1MOHM, J, 1/4W           | R616    | ERDS2TJ471   | C 470OHM, J, 1/4W       |
| R507    | ERDS2TJ151   | C 150OHM, J, 1/4W          | R618    | ERDS2TJ331   | C 330OHM, J, 1/4W       |
| R508    | ERDS2TJ224   | C 220KOHM, J, 1/4W         | R619    | ERDS2TJ331   | C 330OHM, J, 1/4W       |
| R510    | ERDS2TJ101   | C 100OHM, J, 1/4W          | R620    | ERDS2TJ331   | C 330OHM, J, 1/4W       |
| R511    | ERDS2TJ475   | C 4.7MOHM, J, 1/4W         | R621    | ERDS2TJ102   | C 1KOHM, J, 1/4W        |
| R512    | ERDS2TJ103   | C 10KOHM, J, 1/4W          | R622    | ERDS2TJ102   | C 1KOHM, J, 1/4W        |
| R513    | ERDS2TJ103   | C 10KOHM, J, 1/4W          | R623    | ERDS2TJ102   | C 1KOHM, J, 1/4W        |
| R514    | ERD25TJ561   | C 560OHM, J, 1/4W          | R624    | ERDS2TJ244   | C 240KOHM, J, 1/4W      |
| R515    | ERDS2TJ561   | C 560OHM, J, 1/4W          | R625    | ERDS2TJ102   | C 1KOHM, J, 1/4W        |
| R517    | ERQ12HJ1R0   | F 1OHM, J, 1/2W            | R626    | ERDS2TJ102   | C 1KOHM, J, 1/4W        |
| R520    | ERDS2TJ183   | C 18KOHM, J, 1/4W          | R627    | ERDS2TJ102   | C 1KOHM, J, 1/4W        |
| R522    | ERD25TJ223   | C 22KOHM, J, 1/4W          | R629    | ERDS2TJ105   | C 1MOHM, J, 1/4W        |
| R523    | ERQ1CJP6R8S  | F 6.8OHM, J, 1W $\Delta$   | R630    | ERDS2TJ332   | C 3.3KOHM, J, 1/4W      |
| R524    | ERQ1CJ102    | F 1KOHM, J, 1W $\Delta$    | R632    | ERDS2TJ332   | C 3.3KOHM, J, 1/4W      |
| R525    | ER050CKF1153 | M 115KOHM, F, 1/2W MTV     | R633    | ERDS2TJ332   | C 3.3KOHM, J, 1/4W      |
| R526    | ERG2ANJ822   | M 8.2KOHM, J, 2W           | R641    | ERD25TJ563   | C 56KOHM, J, 1/4W       |
| R527    | ERDS2TJ821   | C 820OHM, J, 1/4W          | R646    | ERD25TJ330   | C 33KOHM, J, 1/4W       |
| R529    | ERDS2TJ334   | C 330KOHM, J, 1/4W         | R648    | ERDS2TJ820   | C 82OHM, J, 1/4W        |
| R531    | ERDS2TJ223   | C 22KOHM, J, 1/4W          | R649    | ERDS2TJ125   | C 1.2MOHM, J, 1/4W      |
| R532    | ERDS2TJ104   | C 100KOHM, J, 1/4W         | R655    | ERDS2TJ102   | C 1KOHM, J, 1/4W        |
| R533    | ERDS2TJ103   | C 10KOHM, J, 1/4W          | R671    | ERDS2TJ102   | C 1KOHM, J, 1/4W        |
| R534    | ERQ12AJ101   | F 100OHM, J, 1/2W $\Delta$ | R674    | ERDS2TJ152   | C 1.5KOHM, J, 1/4W      |
| R538    | ERDS2TJ684   | C 680KOHM, J, 1/4W         | R675    | ERDS2TJ221   | C 220OHM, J, 1/4W       |
| R539    | ERDS2TJ824   | C 820KOHM, J, 1/4W         | R676    | ERDS2TJ561   | C 560OHM, J, 1/4W       |
| R540    | ERQ14AJ100P  | F 10OHM, J, 1/4W $\Delta$  | R717    | ERD25TJ472   | C 4.7KOHM, J, 1/4W      |
| R541    | ER0S2CKF7321 | M7.32KOHM, F, 1/4W MTV     | R718    | ERDS2TJ152   | C 1.5KOHM, J, 1/4W      |
| R542    | ER0S2CKF5111 | M5.11KOHM, F, 1/4W         | R725    | ERDS2TJ562   | C 5.6KOHM, J, 1/4W      |
| R544    | ERDS2TJ682   | C 6.8KOHM, J, 1/4W         | R729    | ERQ2CJ100    | F 10OHM, J, 2W $\Delta$ |
| R545    | ERDS2TJ332   | C 3.3KOHM, J, 1/4W         | R731    | ERDS2TJ104   | C 100KOHM, J, 1/4W      |
| R546    | ERF15ZK4R7   | W 4.7OHM, 15W              | R732    | ERDS2TJ104   | C 100KOHM, J, 1/4W      |
| R550    | ERG2ANJ123   | M 12KOHM, J, 2W            | R733    | ERDS2TJ472   | C 4.7KOHM, J, 1/4W      |
| R551    | ERG3ANJ272   | M 2.7KOHM, J, 3W           | R734    | ERDS2TJ102   | C 1KOHM, J, 1/4W        |
| R552    | ERDS2TJ564   | C 560KOHM, J, 1/4W         | R803    | ERG2ANJ563   | M 56KOHM, J, 2W MTV     |
| R553    | ERDS2TJ824   | C 820KOHM, J, 1/4W         | R804    | ERG1ANJ203   | M 20KOHM, J, 1W         |
| R557    | ERDS1TJ105   | C 1MOHM, J, 1/2W           | R805    | ERG2ANJ473H  | M 47KOHM, J, 2W         |
| R561    | ERDS2TJ683   | C 68KOHM, J, 1/4W          | R806    | ERG1ANJ103H  | M 10KOHM, J, 1W         |
| R608    | ERD25TJ101   | C 100OHM, J, 1/4W          | R807    | ERG1ANJ150H  | M 15OHM, J, 1W          |
| R609    | ERDS2TJ222   | C 2.2KOHM, J, 1/4W         | R809    | ERF15ZK4R7   | W 4.7OHM, 15W           |
| R610    | ERDS2TJ152   | C 1.5KOHM, J, 1/4W         | R810    | ERW2PKR22C   | W 0.22OHM, K, 2W MTV    |
| R612    | ERDS2TJ472   | C 4.7KOHM, J, 1/4W         | R812    | ERDS2TJ331   | C 330OHM, J, 1/4W       |

| Ref.No. | Part No.     | Description                   | Ref.No. | Part No.     | Description        |
|---------|--------------|-------------------------------|---------|--------------|--------------------|
| R813    | ERDS2TJ362   | C 3.6KOHM, J, 1/4W            | R1134   | ERDS2TJ123   | C 12KOHM, J, 1/4W  |
| R814    | ERDS2TJ101   | C 100OHM, J, 1/4W             | R1135   | ERDS2TJ101   | C 100OHM, J, 1/4W  |
| R815    | ERDS1TJ682   | C 6.8KOHM, J, 1/2W            | R1136   | ERDS2TJ103   | C 10KOHM, J, 1/4W  |
| R816    | ERQ12HKR82   | F 0.82OHM, K, 1/2W $\Delta$   | R1138   | ERDS2TJ105   | C 1MOHM, J, 1/4W   |
| R817    | ERQ2CKR33    | F 0.33OHM, K, 2W MTV $\Delta$ | R1139   | ERDS2TJ392   | C 3.9KOHM, J, 1/4W |
| R819    | ERDS2TJ102   | C 1KOHM, J, 1/4W              | R1140   | ERDS2TJ101   | C 100OHM, J, 1/4W  |
| R821    | ERD75TAJ825  | C 8.2MOHM, J, 3/4W            | R1141   | ERD25TJ101   | C 100OHM, J, 1/4W  |
| R822    | ERQ2CKR33    | F 0.33OHM, K, 2W MTV $\Delta$ | R1142   | ERDS2TJ101   | C 100OHM, J, 1/4W  |
| R824    | ERDS2TJ473   | C 47KOHM, J, 1/4W             | R1143   | ERD25TJ101   | C 100OHM, J, 1/4W  |
| R825    | ERDS2TJ332   | C 3.3KOHM, J, 1/4W            | R1144   | ERDS2TJ123   | C 12KOHM, J, 1/4W  |
| R826    | ERDS2TJ561   | C 560OHM, J, 1/4W             | R1145   | ERDS2TJ273   | C 27KOHM, J, 1/4W  |
| R828    | ERGLANJ103H  | M 10KOHM, J, 1W               | R1146   | ERDS2TJ222   | C 2.2KOHM, J, 1/4W |
| R829    | ERGLANJ822H  | M 8.2KOHM, J, 1W              | R1147   | ERD25TJ101   | C 100OHM, J, 1/4W  |
| R830    | ERDS2TJ473   | C 47KOHM, J, 1/4W             | R1148   | ERDS2TJ123   | C 12KOHM, J, 1/4W  |
| R831    | ERDS2TJ272   | C 2.7KOHM, J, 1/4W            | R1149   | ERDS2TJ563   | C 56KOHM, J, 1/4W  |
| R833    | ERQ12AJ220P  | F 22OHM, J, 1/2W $\Delta$     | R1150   | ERD25TJ123   | C 12KOHM, J, 1/4W  |
| R834    | ERDS1TJ470   | C 47OHM, J, 1/2W              | R1151   | ERDS2TJ472   | C 4.7KOHM, J, 1/4W |
| R837    | ERDS2TJ332   | C 3.3KOHM, J, 1/4W            | R1152   | ERD25TJ101   | C 100OHM, J, 1/4W  |
| R1102   | ERDS2TJ223   | C 22KOHM, J, 1/4W             | R1153   | ERDS2TJ222   | C 2.2KOHM, J, 1/4W |
| R1103   | ERDS2TJ101   | C 100OHM, J, 1/4W             | R1154   | ERDS2TJ273   | C 27KOHM, J, 1/4W  |
| R1104   | ERDS2TJ101   | C 100OHM, J, 1/4W             | R1155   | ERDS2TJ222   | C 2.2KOHM, J, 1/4W |
| R1105   | ERDS2TJ472   | C 4.7KOHM, J, 1/4W            | R1156   | ERD25TJ123   | C 12KOHM, J, 1/4W  |
| R1106   | ER0S2CKF1002 | M 10KOHM, F, 1/4W             | R1157   | ERDS2TJ183   | C 18KOHM, J, 1/4W  |
| R1107   | ER0S2CKF1002 | M 10KOHM, F, 1/4W             | R1158   | ERDS2TJ822   | C 8.2KOHM, J, 1/4W |
| R1108   | ERD25TJ152   | C 1.5KOHM, J, 1/4W            | R1159   | ERDS2TJ101   | C 100OHM, J, 1/4W  |
| R1109   | ERDS2TJ562   | C 5.6KOHM, J, 1/4W            | R1160   | ERDS2TJ101   | C 100OHM, J, 1/4W  |
| R1110   | ERD25TJ152   | C 1.5KOHM, J, 1/4W            | R1161   | ERDS2TJ153   | C 15KOHM, J, 1/4W  |
| R1111   | ERDS2TJ471   | C 470OHM, J, 1/4W             | R1162   | ERDS2TJ272   | C 2.7KOHM, J, 1/4W |
| R1113   | ERDS2TJ122   | C 1.2KOHM, J, 1/4W            | R1163   | ERDS2TJ123   | C 12KOHM, J, 1/4W  |
| R1115   | ERDS2TJ222   | C 2.2KOHM, J, 1/4W            | R1164   | ERDS2TJ102   | C 1KOHM, J, 1/4W   |
| R1119   | ERDS2TJ101   | C 100OHM, J, 1/4W             | R1165   | ERDS2TJ101   | C 100OHM, J, 1/4W  |
| R1120   | ERDS2TJ104   | C 100KOHM, J, 1/4W            | R1170   | ERDS2TJ272   | C 2.7KOHM, J, 1/4W |
| R1121   | ERDS2TJ332   | C 3.3KOHM, J, 1/4W            | R1172   | ERDS2TJ123   | C 12KOHM, J, 1/4W  |
| R1122   | ERDS2TJ332   | C 3.3KOHM, J, 1/4W            | R1175   | ERDS2TJ101   | C 100OHM, J, 1/4W  |
| R1124   | ERDS2TJ102   | C 1KOHM, J, 1/4W              | R1176   | ERDS2TJ103   | C 10KOHM, J, 1/4W  |
| R1125   | ERDS2TJ102   | C 1KOHM, J, 1/4W              | R1184   | ERDS2TJ222   | C 2.2KOHM, J, 1/4W |
| R1126   | ERDS2TJ101   | C 100OHM, J, 1/4W             | R1185   | ERDS2TJ222   | C 2.2KOHM, J, 1/4W |
| R1127   | ERDS2TJ560   | C 56OHM, J, 1/4W              | R1186   | ERDS2TJ332   | C 3.3KOHM, J, 1/4W |
| R1128   | ERDS2TJ560   | C 56OHM, J, 1/4W              | R1187   | ERDS2TJ512   | C 5.1KOHM, J, 1/4W |
| R1129   | ERDS2TJ103   | C 10KOHM, J, 1/4W             | R1188   | ERD25TJ912   | C 9.1KOHM, J, 1/4W |
| R1130   | ERD25TJ332   | C 3.3KOHM, J, 1/4W            | R1189   | ER0S2CKF2102 | M 21KOHM, F, 1/4W  |
| R1131   | ERDS2TJ392   | C 3.9KOHM, J, 1/4W            | R1190   | ERDS2TJ222   | C 2.2KOHM, J, 1/4W |
| R1133   | ERDS2TJ123   | C 12KOHM, J, 1/4W             | R1191   | ERDS2TJ222   | C 2.2KOHM, J, 1/4W |

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| Ref.No. | Part No.     | Description            | Ref.No. | Part No.     | Description            |
|---------|--------------|------------------------|---------|--------------|------------------------|
| R1192   | ERDS2TJ332   | C 3.3KOHM, J, 1/4W     | R2054   | ERJ6GEYJ104  | M 100KOHM, J, 1/10W    |
| R1193   | ERDS2TJ512   | C 5.1KOHM, J, 1/4W     | R2055   | ERJ6GEYJ273  | M 27KOHM, J, 1/10W     |
| R1194   | ERD25TJ912   | C 9.1KOHM, J, 1/4W     | R2056   | ERJ6GEYJ104  | M 100KOHM, J, 1/10W    |
| R1199   | ERD25TJ103   | C 10KOHM, J, 1/4W      | R2057   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W     |
| R1201   | EROS2CKF1373 | M 137KOHM, F, 1/4W MTV | R2058   | ERJ6GEYJ223  | M 22KOHM, J, 1/10W     |
| R1202   | ERDS2TJ4R7   | C 4.7OHM, J, 1/4W      | R2060   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W     |
| R1203   | ERDS2TJ562   | C 5.6KOHM, J, 1/4W     | R2061   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W     |
| R1204   | ERDS2TJ470   | C 47OHM, J, 1/4W       | R2062   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W     |
| R1210   | ERDS2TJ182   | C 1.8KOHM, J, 1/4W     | R2063   | ERJ6GEYJ681  | M 680OHM, J, 1/10W     |
| R1211   | ERDS2TJ222   | C 2.2KOHM, J, 1/4W     | R2064   | ERJ6GEYJ222  | M 2.2KOHM, J, 1/10W    |
| R1212   | ERDS2TJ182   | C 1.8KOHM, J, 1/4W     | R2065   | ERJ6GEYJ681  | M 680OHM, J, 1/10W     |
| R2004   | ERJ6GEYJ392  | M 3.9KOHM, J, 1/10W    | R2070   | ERJ6GEYJ563  | M 56KOHM, J, 1/10W MTV |
| R2005   | ERJ6GEYJ392  | M 3.9KOHM, J, 1/10W    | R2071   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W     |
| R2006   | ERJ6GEYJ102  | M 1KOHM, J, 1/10W      | R2072   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W     |
| R2007   | ERJ6GEYJ101  | M 100OHM, J, 1/10W     | R2073   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W     |
| R2009   | ERJ6GEYJ560  | M 56OHM, J, 1/10W      | R2074   | ERJ6GEYJ562  | M 5.6KOHM, J, 1/10W    |
| R2010   | ERJ6GEYJ431  | M 430OHM, J, 1/10W     | R2075   | ERJ6GEY0R00  | M 0OHM, J, 1/10W       |
| R2011   | ERJ6GEYJ241  | M 240OHM, J, 1/10W     | R2076   | ERJ6GEYJ394  | M 390KOHM, J, 1/10W    |
| R2012   | ERJ6GEYJ332  | M 3.3KOHM, J, 1/10W    | R2077   | ERJ6GEYJ563  | M 56KOHM, J, 1/10W MTV |
| R2013   | ERJ6GEYJ332  | M 3.3KOHM, J, 1/10W    | R2078   | ERJ6GEYJ394  | M 390KOHM, J, 1/10W    |
| R2014   | ERJ6GEYJ823  | M 82KOHM, J, 1/10W     | R2079   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W     |
| R2016   | ERJ6GEYJ101  | M 100OHM, J, 1/10W     | R2080   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W     |
| R2019   | ERJ6GEYJ104  | M 100KOHM, J, 1/10W    | R2081   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W     |
| R2020   | ERJ6GEYJ150  | M 15OHM, J, 1/10W      | R2082   | ERJ6GEYJ562  | M 5.6KOHM, J, 1/10W    |
| R2021   | ERJ6GEYJ223  | M 22KOHM, J, 1/10W     | R2085   | ERJ6GEYJ101  | M 100OHM, J, 1/10W     |
| R2022   | ERJ6GEYJ223  | M 22KOHM, J, 1/10W     | R2086   | ERJ6GEYJ101  | M 100OHM, J, 1/10W     |
| R2023   | ERJ6GEYJ392  | M 3.9KOHM, J, 1/10W    | R2204   | ERDS2TJ101   | C 100OHM, J, 1/4W      |
| R2025   | ERJ6GEYJ224  | M 220KOHM, J, 1/10W    | R2205   | ERDS2TJ101   | C 100OHM, J, 1/4W      |
| R2030   | ERJ6GEY0R00  | M 0OHM, J, 1/10W       | R2206   | ERDS2TJ472   | C 4.7KOHM, J, 1/4W     |
| R2035   | ERJ6GEYJ472  | M 4.7KOHM, J, 1/10W    | R2207   | EVND4AA00B14 | CONTROL 10KOHMB        |
| R2036   | ERJ6GEYJ562  | M 5.6KOHM, J, 1/10W    | R2208   | ERDS2TJ103   | C 10KOHM, J, 1/4W      |
| R2037   | ERJ6GEYJ562  | M 5.6KOHM, J, 1/10W    | R2209   | ERDS2TJ223   | C 22KOHM, J, 1/4W      |
| R2038   | ERJ6GEYJ562  | M 5.6KOHM, J, 1/10W    | R2210   | ERQ14AJ100P  | F 10OHM, J, 1/4W       |
| R2039   | ERJ6GEYJ182  | M 1.8KOHM, J, 1/10W    | R2213   | ERDS2TJ471   | C 470OHM, J, 1/4W      |
| R2040   | ERJ6GEYJ562  | M 5.6KOHM, J, 1/10W    | R2214   | ERDS2TJ471   | C 470OHM, J, 1/4W      |
| R2041   | ERJ6GEYJ472  | M 4.7KOHM, J, 1/10W    | R2301   | ERDS2TJ101   | C 100OHM, J, 1/4W      |
| R2042   | ERJ6GEYJ473  | M 47KOHM, J, 1/10W     | R2302   | ERDS2TJ101   | C 100OHM, J, 1/4W      |
| R2045   | ERJ6GEYJ473  | M 47KOHM, J, 1/10W     | R2303   | ERDS2TJ101   | C 100OHM, J, 1/4W      |
| R2049   | ERJ6GEY0R00  | M 0OHM, J, 1/10W       | R2304   | ERDS2TJ101   | C 100OHM, J, 1/4W      |
| R2050   | ERJ6GEYJ471  | M 470OHM, J, 1/10W     | R2305   | ERDS2TJ824   | C 820KOHM, J, 1/4W     |
| R2051   | ERJ6GEYJ471  | M 470OHM, J, 1/10W     | R2306   | ERDS2TJ332   | C 3.3KOHM, J, 1/4W     |
| R2052   | ERJ6GEYJ105  | M 1MOHM, J, 1/10W      | R2307   | ERDS2TJ102   | C 1KOHM, J, 1/4W       |
| R2053   | ERJ6GEYJ102  | M 1KOHM, J, 1/10W      | R2308   | ERDS2TJ104   | C 100KOHM, J, 1/4W     |

| Ref.No. | Part No.   | Description        | Ref.No. | Part No.   | Description       |
|---------|------------|--------------------|---------|------------|-------------------|
| R2309   | ERDS2TJ123 | C 12KOHM, J,1/4W   | R3013   | ERDS2TJ184 | C 180KOHM, J,1/4W |
| R2310   | ERDS2TJ102 | C 1KOHM, J,1/4W    | R3014   | ERDS2TJ102 | C 1KOHM, J,1/4W   |
| R2311   | ERDS1TJ2R2 | C 2.2OHM, J,1/2W   | R3015   | ERDS2TJ184 | C 180KOHM, J,1/4W |
| R2312   | ERDS1TJ2R2 | C 2.2OHM, J,1/2W   | R3020   | ERDS2TJ102 | C 1KOHM, J,1/4W   |
| R2313   | ERDS2TJ822 | C 8.2KOHM, J,1/4W  | R3025   | ERDS2TJ101 | C 100OHM, J,1/4W  |
| R2314   | ERDS2TJ392 | C 3.9KOHM, J,1/4W  | R3026   | ERDS2TJ102 | C 1KOHM, J,1/4W   |
| R2315   | ERDS2TJ392 | C 3.9KOHM, J,1/4W  | R3028   | ERDS2TJ472 | C 4.7KOHM, J,1/4W |
| R2316   | ERDS2TJ102 | C 1KOHM, J,1/4W    | R3029   | ERDS2TJ223 | C 22KOHM, J,1/4W  |
| R2317   | ERDS2TJ102 | C 1KOHM, J,1/4W    | R3030   | ERDS2TJ223 | C 22KOHM, J,1/4W  |
| R2318   | ERDS2TJ101 | C 100OHM, J,1/4W   | R3031   | ERDS2TJ101 | C 100OHM, J,1/4W  |
| R2319   | ERDS2TJ101 | C 100OHM, J,1/4W   | R3034   | ERD25TJ101 | C 100OHM, J,1/4W  |
| R2320   | ERDS2TJ101 | C 100OHM, J,1/4W   | R3038   | ERD25TJ223 | C 22KOHM, J,1/4W  |
| R2321   | ERDS2TJ392 | C 3.9KOHM, J,1/4W  | R3039   | ERDS2TJ223 | C 22KOHM, J,1/4W  |
| R2322   | ERDS2TJ392 | C 3.9KOHM, J,1/4W  | R3044   | ERDS2TJ273 | C 27KOHM, J,1/4W  |
| R2323   | ERDS2TJ102 | C 1KOHM, J,1/4W    | R3046   | ERDS2TJ103 | C 10KOHM, J,1/4W  |
| R2326   | ERD25TJ101 | C 100OHM, J,1/4W   | R3049   | ERDS2TJ103 | C 10KOHM, J,1/4W  |
| R2327   | ERDS2TJ101 | C 100OHM, J,1/4W   | R3051   | ERDS2TJ102 | C 1KOHM, J,1/4W   |
| R2331   | ERDS2TJ104 | C 100KOHM, J,1/4W  | R3052   | ERDS2TJ102 | C 1KOHM, J,1/4W   |
| R2332   | ERDS2TJ472 | C 4.7KOHM, J,1/4W  | R3053   | ERDS2TJ102 | C 1KOHM, J,1/4W   |
| R2333   | ERQ2CJ1R0  | F 1OHM, J, 2W MTV△ | R3054   | ERDS2TJ391 | C 390OHM, J,1/4W  |
| R2334   | ERDS2TJ122 | C 1.2KOHM, J,1/4W  | R3055   | ERDS2TJ103 | C 10KOHM, J,1/4W  |
| R2335   | ERDS2TJ122 | C 1.2KOHM, J,1/4W  | R3056   | ERDS2TJ104 | C 100KOHM, J,1/4W |
| R2349   | ERDS2TJ821 | C 820OHM, J,1/4W   | R3057   | ERDS2TJ101 | C 100OHM, J,1/4W  |
| R2350   | ERDS2TJ821 | C 820OHM, J,1/4W   | R3060   | ERDS2TJ104 | C 100KOHM, J,1/4W |
| R2351   | ERDS2TJ104 | C 100KOHM, J,1/4W  | R3061   | ERDS2TJ223 | C 22KOHM, J,1/4W  |
| R2352   | ERDS2TJ104 | C 100KOHM, J,1/4W  | R3063   | ERDS2TJ104 | C 100KOHM, J,1/4W |
| R2353   | ERDS2TJ473 | C 47KOHM, J,1/4W   | R3064   | ERDS2TJ101 | C 100OHM, J,1/4W  |
| R2354   | ERDS2TJ473 | C 47KOHM, J,1/4W   | R3065   | ERDS2TJ102 | C 1KOHM, J,1/4W   |
| R2389   | ERDS2TJ103 | C 10KOHM, J,1/4W   | R3066   | ERDS2TJ272 | C 2.7KOHM, J,1/4W |
| R2390   | ERDS2TJ103 | C 10KOHM, J,1/4W   | R3067   | ERDS2TJ101 | C 100OHM, J,1/4W  |
| R2819   | ERDS2TJ331 | C 330OHM, J,1/4W   | R3068   | ERDS2TJ102 | C 1KOHM, J,1/4W   |
| R2820   | ERDS2TJ331 | C 330OHM, J,1/4W   | R3069   | ERD25FJ100 | C 10OHM, J,1/4W   |
| R3001   | ERDS2TJ102 | C 1KOHM, J,1/4W    | R3070   | ERDS2TJ221 | C 220OHM, J,1/4W  |
| R3002   | ERDS2TJ184 | C 180KOHM, J,1/4W  | R3071   | ERDS2TJ680 | C 68OHM, J,1/4W   |
| R3003   | ERDS2TJ102 | C 1KOHM, J,1/4W    | R3072   | ERDS2TJ181 | C 180OHM, J,1/4W  |
| R3004   | ERDS2TJ184 | C 180KOHM, J,1/4W  | R3073   | ERDS2TJ102 | C 1KOHM, J,1/4W   |
| R3005   | ERDS2TJ750 | C 75OHM, J,1/4W    | R3074   | ERDS2TJ331 | C 330OHM, J,1/4W  |
| R3006   | ERDS2TJ750 | C 75OHM, J,1/4W    | R3075   | ERDS2TJ102 | C 1KOHM, J,1/4W   |
| R3007   | ERDS2TJ331 | C 330OHM, J,1/4W   | R3076   | ERDS2TJ103 | C 10KOHM, J,1/4W  |
| R3008   | ERDS2TJ243 | C 24KOHM, J,1/4W   | R3077   | ERDS2TJ182 | C 1.8KOHM, J,1/4W |
| R3009   | ERDS2TJ273 | C 27KOHM, J,1/4W   | R3078   | ERDS2TJ472 | C 4.7KOHM, J,1/4W |
| R3010   | ERDS2TJ750 | C 75OHM, J,1/4W    | R3079   | ERDS2TJ271 | C 270OHM, J,1/4W  |
| R3012   | ERDS2TJ102 | C 1KOHM, J,1/4W    | R3080   | ERDS2TJ152 | C 1.5KOHM, J,1/4W |

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| Ref.No. | Part No.     | Description         | Ref.No.           | Part No.     | Description         |
|---------|--------------|---------------------|-------------------|--------------|---------------------|
| R3081   | ERDS2TJ101   | C 100OHM, J, 1/4W   | R3545             | ERJ6GEYJ101  | M 100OHM, J, 1/10W  |
| R3083   | ERDS2TJ103   | C 10KOHM, J, 1/4W   | R3546             | ERJ6GEYJ101  | M 100OHM, J, 1/10W  |
| R3084   | ERDS2TJ103   | C 10KOHM, J, 1/4W   | R3552             | ERJ6GEYJ101  | M 100OHM, J, 1/10W  |
| R3085   | ERDS2TJ103   | C 10KOHM, J, 1/4W   | R3553             | ERJ6GEYJ105  | M 1MOHM, J, 1/10W   |
| R3086   | ERDS2TJ102   | C 1KOHM, J, 1/4W    | R3555             | ERJ6GEYJ101  | M 100OHM, J, 1/10W  |
| R3087   | ERDS2TJ102   | C 1KOHM, J, 1/4W    | R3557             | ERJ6GEYJ103  | M 10KOHM, J, 1/10W  |
| R3089   | ERDS2TJ331   | C 330OHM, J, 1/4W   | R3558             | ERJ6GEYJ101  | M 100OHM, J, 1/10W  |
| R3090   | ERDS2TJ102   | C 1KOHM, J, 1/4W    | R3559             | ERJ8GICYJ102 | M 1KOHM, J, 1/8W    |
| R3091   | ERDS2TJ103   | C 10KOHM, J, 1/4W   | R3560             | ERJ6GEYJ561  | M 560OHM, J, 1/10W  |
| R3501   | ERJ8GICYJ221 | M 220OHM, J, 1/8W   | R3561             | ERJ6GEYJ392  | M 3.9KOHM, J, 1/10W |
| R3502   | ERJ6GEYJ392  | M 3.9KOHM, J, 1/10W | R3562             | ERJ6GEYJ122  | M 1.2KOHM, J, 1/10W |
| R3503   | ERJ6GEYJ471  | M 470OHM, J, 1/10W  | R3563             | ERJ6GEYJ103  | M 10KOHM, J, 1/10W  |
| R3504   | ERJ6GEYJ822  | M 8.2KOHM, J, 1/10W | R3567             | ERJ6GEYJ472  | M 4.7KOHM, J, 1/10W |
| R3505   | ERJ8GICYJ102 | M 1KOHM, J, 1/8W    | R3568             | ERJ6GEYJ822  | M 8.2KOHM, J, 1/10W |
| R3506   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W  | R3569             | ERJ6GEYJ153  | M 15KOHM, J, 1/10W  |
| R3507   | ERJ8GICYJ102 | M 1KOHM, J, 1/8W    | R3570             | ERJ6GEYJ223  | M 22KOHM, J, 1/10W  |
| R3508   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W  | R3571             | ERJ6GEYJ101  | M 100OHM, J, 1/10W  |
| R3509   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W  | R3572             | ERJ6GEYJ101  | M 100OHM, J, 1/10W  |
| R3510   | ERJ8GICYJ102 | M 1KOHM, J, 1/8W    | R3573             | ERJ8GICYJ331 | M 330OHM, J, 1/8W   |
| R3511   | ERJ8GICYJ102 | M 1KOHM, J, 1/8W    | R3574             | ERJ8GICYJ331 | M 330OHM, J, 1/8W   |
| R3512   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W  | R3575             | ERJ6GEYJ103  | M 10KOHM, J, 1/10W  |
| R3513   | ERJ6GEYJ223  | M 22KOHM, J, 1/10W  | R3580             | ERJ6GEYJ101  | M 100OHM, J, 1/10W  |
| R3514   | EVNDDAA03B24 | CONTROL 20KOHMB MTV | R3582             | ERJ6GEYJ103  | M 10KOHM, J, 1/10W  |
| R3515   | ERJ6GEYJ392  | M 3.9KOHM, J, 1/10W | R3584             | ERJ6GEYJ473  | M 47KOHM, J, 1/10W  |
| R3516   | ERJ6GEYJ153  | M 15KOHM, J, 1/10W  | R3585             | ERJ6GEYJ473  | M 47KOHM, J, 1/10W  |
| R3519   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W  | R3586             | ERJ6GEYJ472  | M 4.7KOHM, J, 1/10W |
| R3522   | ERJ6GEYJ273  | M 27KOHM, J, 1/10W  | R3592             | ERJ6GEYJ472  | M 4.7KOHM, J, 1/10W |
| R3525   | ERJ6GEYJ332  | M 3.3KOHM, J, 1/10W | R3593             | ERJ6GEYJ222  | M 2.2KOHM, J, 1/10W |
| R3528   | ERJ8GICYJ561 | M 560OHM, J, 1/8W   | R3594             | ERJ6GEYJ392  | M 3.9KOHM, J, 1/10W |
| R3529   | ERJ8GICYJ561 | M 560OHM, J, 1/8W   | R3595             | ERJ6GEYJ222  | M 2.2KOHM, J, 1/10W |
| R3530   | ERQ14AJ100P  | F 10OHM, J, 1/4W    | R3596             | ERJ6GEYJ222  | M 2.2KOHM, J, 1/10W |
| R3532   | ERJ6GEYJ823  | M 82KOHM, J, 1/10W  | R3597             | ERJ6GEYJ103  | M 10KOHM, J, 1/10W  |
| R3533   | ERJ6GEYJ182  | M 1.8KOHM, J, 1/10W | R3598             | ERJ6GEYJ562  | M 5.6KOHM, J, 1/10W |
| R3534   | ERJ6GEYJ750  | M 75OHM, 1/10W      | <b>CAPACITORS</b> |              |                     |
| R3535   | ERJ6GEYJ750  | M 75OHM, 1/10W      | C101              | ECKF1H103ZF  | C 0.01UF, Z, 50V    |
| R3536   | ERJ6GEYJ750  | M 75OHM, 1/10W      | C102              | ECEA1CU470   | E 47UF, 16V         |
| R3538   | ERJ6GEYJ103  | M 10KOHM, J, 1/10W  | C103              | ECQV1H334JZ  | P 0.33UF, J, 50V    |
| R3539   | ERJ6GEYJ101  | M 100OHM, J, 1/10W  | C104              | ECKF1H103ZF  | C 0.01UF, Z, 50V    |
| R3540   | ERJ6GEYJ101  | M 100OHM, J, 1/10W  | C105              | ECKF1H103ZF  | C 0.01UF, Z, 50V    |
| R3541   | ERJ6GEYJ101  | M 100OHM, J, 1/10W  | C106              | ECEA1CU471   | E 470UF, 16V        |
| R3542   | ERJ6GEYJ101  | M 100OHM, J, 1/10W  | C107              | ECKF1H103ZF  | C 0.01UF, Z, 50V    |
| R3543   | ERJ6GEYJ472  | M 4.7KOHM, J, 1/10W | C109              | ECKF1H103ZF  | C 0.01UF, Z, 50V    |
| R3544   | ERJ6GEYJ101  | M 100OHM, J, 1/10W  | C110              | ECKF1H103ZF  | C 0.01UF, Z, 50V    |

| Ref.No. | Part No.    | Description       | Ref.No. | Part No.     | Description            |
|---------|-------------|-------------------|---------|--------------|------------------------|
| C111    | ECEA1CFS470 | E 47UF, 16V       | C203    | ECCF1H151J   | C 150PF, J, 50V        |
| C112    | ECEA1HFS3R3 | E 3.3UF, 50V      | C212    | ECCF1H180JC  | C 18PF, J, 50V         |
| C113    | ECEA1HFSR47 | E 0.47UF, 50V     | C240    | ECCF1H121JP  | C 120PF, J, 50V        |
| C114    | ECEA1HN010S | E 1UF, 50V        | C250    | ECCF1H560J   | C 56PF, J, 50V         |
| C115    | ECKF1H103ZF | C 0.01UF, Z, 50V  | C302    | ECKF1H103ZF  | C 0.01UF, Z, 50V       |
| C116    | ECEA1CU470  | E 47UF, 16V       | C303    | ECEA1HUR33   | E 0.33UF, 50V          |
| C117    | ECCF1H100DC | C 10PF, D, 50V    | C304    | ECEA1CN330S  | E 33UF, 16V            |
| C118    | ECKF1H103ZF | C 0.01UF, Z, 50V  | C305    | ECEA1HU4R7   | E 4.7UF, 50V           |
| C120    | ECEA1HFSR47 | E 0.47UF, 50V     | C319    | ECEA1CN470S  | E 47UF, 16V            |
| C121    | ECEA1CU470  | E 47UF, 16V       | C350    | ECCF1H331J   | C 330PF, J, 50V        |
| C122    | ECEA1HFSR47 | E 0.47UF, 50V     | C351    | ECCF1H271J   | C 270PF, J, 50V        |
| C123    | ECEA1CU330  | E 33UF, 16V       | C352    | ECCF1H271J   | C 270PF, J, 50V        |
| C124    | ECKF1H103ZF | C 0.01UF, Z, 50V  | C353    | ECCF1H271J   | C 270PF, J, 50V        |
| C125    | ECCF1H180J  | C 18PF, J, 50V    | C354    | ECKD3D821KBN | C 820PF, K, 2KV        |
| C126    | ECKF1H103ZF | C 0.01UF, Z, 50V  | C356    | ECKD2H103PU  | C 0.01UF, P, 500V      |
| C128    | ECCF1H120JC | C 12PF, J, 50V    | C410    | ECQB1H153KF  | P 0.015UF, K, 50V      |
| C130    | ECCF1H080DC | C 8PF, D, 50V     | C411    | ECKF1H103ZF  | C 0.01UF, Z, 50V       |
| C131    | ECCF1H080DC | C 8PF, D, 50V     | C438    | ECEA1CGE471  | E 470UF, 16V           |
| C132    | ECCF1H270JC | C 27PF, J, 50V    | C439    | ECQB1H183JF  | P 0.018UF, J, 50V MTV  |
| C133    | ECCF1H070DC | C 7PF, D, 50V     | C440    | ECSF1EE225   | T 2.2UF, 25V           |
| C134    | ECQB1H473JF | P 0.047UF, J, 50V | C441    | ECSF1EE225   | T 2.2UF, 25V           |
| C136    | ECCF1H180J  | C 18PF, J, 50V    | C442    | ECEA1CGE471  | E 470UF, 16V           |
| C137    | ECCF1H470JC | C 47PF, J, 50V    | C452    | ECEA1AGE330  | E 33UF, 10V            |
| C138    | ECCF1H220J  | C 22PF, J, 50V    | C454    | ECKD2H122KB2 | C 1200PF, K, 500V      |
| C139    | ECKF1H103ZF | C 0.01UF, Z, 50V  | C455    | ECKF1H102KB  | C 1000PF, K, 50V       |
| C140    | ECKF1H103ZF | C 0.01UF, Z, 50V  | C456    | ECQV1H224JZ  | P 0.22UF, J, 50V       |
| C141    | ECQV1H104JZ | P 0.1UF, J, 50V   | C457    | ECQV1224JZ3  | P 0.22UF, 100V MTV     |
| C142    | ECEA1CU470  | E 47UF, 16V       | C458    | ECEA1VGE101  | E 100UF, 35V           |
| C143    | ECKF1H103ZF | C 0.01UF, Z, 50V  | C459    | ECEA1VGE102  | E 1000UF, 35V          |
| C145    | ECQB1H473JF | P 0.047UF, J, 50V | C460    | ECQB1473KF3  | P 0.047UF, K, 100V MTV |
| C147    | ECKF1H121KB | C 120PF, K, 50V   | C461    | ECEA1VGE222  | E 2200UF, 35V          |
| C148    | ECKF1H103ZF | C 0.01UF, Z, 50V  | C462    | ECEA1HGE3R3  | E 3.3UF, 50V           |
| C150    | ECCF1H820J  | C 82PF, J, 50V    | C502    | ECQB1H223JF  | P 0.022UF, J, 50V      |
| C151    | ECEA0JU221  | E 220UF, 6.3V     | C503    | ECCF1H221JU  | C 220PF, J, 50V        |
| C155    | ECEA1HU330  | E 33UF, 50V       | C505    | ECEA1HU010   | E 1UF, 50V             |
| C156    | ECQV1H474JZ | P 0.47UF, J, 50V  | C506    | ECQB1H183KF  | P 0.018UF, K, 50V      |
| C157    | ECQV1H334JZ | P 0.33UF, J, 50V  | C507    | ECEA1HGE010  | E 1UF, 50V             |
| C161    | ECEA1CU100  | E 10UF, 16V       | C508    | ECEA1AGE221  | E 220UF, 10V           |
| C162    | ECKF1H103ZF | C 0.01UF, Z, 50V  | C509    | ECKD3D681JBN | C 680PF, J, 2KV        |
| C166    | ECKF1H103ZF | C 0.01UF, Z, 50V  | C510    | ECQB1H563JF  | P 0.056UF, J, 50V      |
| C167    | ECEA0JU471  | E 470UF, 6.3V     | C511    | ECWH12H682JY | P 6800PF, J, 1.2KV MTV |
| C168    | ECQB1H102JF | P 1000PF, 50V     | C512    | ECKD3D182JBN | C 1800PF, J, 2KV       |
| C169    | ECEA1CN100S | E 10UF, 16V       | C513    | ECEA1VGE471  | E 470UF, 35V           |

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| Ref.No. | Part No.     | Description           | Ref.No. | Part No.     | Description        |
|---------|--------------|-----------------------|---------|--------------|--------------------|
| C514    | ECKD2H471KB2 | C 470PF, K, 500V      | C643    | ECKF1H103ZF  | C 0.01UF, Z, 50V   |
| C515    | ECKD3D821JBN | C 820PF, J, 2KV       | C644    | ECKF1H103ZF  | C 0.01UF, Z, 50V   |
| C516    | ECQB1H682KF  | P 6800PF, K, 50V      | C645    | ECEA1HUR47   | E 0.47UF, 50V      |
| C517    | ECKD3D331JBN | C 330PF, J, 2KV       | C646    | ECEA1CU101   | E 100UF, 16V       |
| C518    | ECQM4103JZ   | P 0.01UF, J, 400V MTV | C671    | ECKF1H561KB  | C 560PF, K, 50V    |
| C519    | ECEA2CNR47S  | E 0.47UF, 160V        | C690    | ECEA1HN2R2S  | E 2.2UF, 50V       |
| C520    | ECEA2EU100   | E 10UF, 250V          | C701    | ECEA1HW4R7S  | E 4.7UF, 50V       |
| C521    | ECKD2H821KB2 | C 820PF, K, 500V      | C801    | ECKDNS471MBJ | C 470PF, M,        |
| C522    | ECWF2H334JNY | P 0.33UF, J, 200V     | C802    | ECQU2A473MN  | P 0.047UF, M, 250V |
| C524    | ECQM4103JZ   | P 0.01UF, J, 400V MTV | C803    | ECQU2A683MN  | P 0.068UF, M, 250V |
| C525    | ECKD2H821KB2 | C 820PF, K, 500V      | C805    | ECKD2H472PU  | C 4700PF, P, 500V  |
| C526    | ECEA1JGE100  | E 10UF, 63V           | C806    | ECKD2H472PU  | C 4700PF, P, 500V  |
| C527    | ECKD2H821KB2 | C 820PF, K, 500V      | C807    | ECKD2H472PU  | C 4700PF, P, 500V  |
| C528    | ECQB1H332KF  | C 3300PF, 50V         | C808    | ECKD2H472PU  | C 4700PF, P, 500V  |
| C529    | ECQB1H103JF  | P 0.01UF, 50V         | C809    | ECOS2GP331DA | E 330UF, 400V MTV  |
| C530    | ECQE2474KS   | P 0.47UF, K, 250V     | C810    | ECKD3D152JBN | C 1500PF, J, 2KV   |
| C535    | ECKD2H821KB2 | C 820PF, K, 500V      | C812    | ECA1EFQ221   | E 220UF, 25V       |
| C538    | ECQB1H333KF  | P 0.033UF, K, 50V     | C815    | ECOS2DG221E  | E 220UF, 200V      |
| C539    | ECKD3D182JBN | C 1800PF, J, 2KV      | C816    | ECEA1EGE102  | E 1000UF, 25V      |
| C550    | ECEA1HU2R2   | E 2.2UF, 50V          | C817    | ECOS2DG221E  | E 220UF, 200V      |
| C551    | ECEA1HU100   | E 10UF, 50V           | C818    | ECEA1EGE470  | E 47UF, 25V        |
| C581    | ECKD2H331KB2 | C 330PF, K, 500V      | C819    | ECEA1VU102   | E 1000UF, 35V      |
| C582    | ECEA1VU101   | E 100UF, 35V          | C820    | ECEA1VGE221  | E 220UF, 35V MTV   |
| C593    | ECEA1HU220   | E 22UF, 50V           | C821    | ECKD3A122KBN | C 1200PF, K, 1KV   |
| C606    | ECKF1H103ZF  | C 0.01UF, Z, 50V      | C822    | ECKD2H391KB2 | C 390PF, K, 500V   |
| C607    | ECKF1H103ZF  | C 0.01UF, Z, 50V      | C823    | ECKD2H221KB2 | C 220PF, K, 500V   |
| C608    | ECKF1H103ZF  | C 0.01UF, Z, 50V      | C824    | ECKD2H221KB2 | C 220PF, K, 500V   |
| C609    | ECKF1H103ZF  | C 0.01UF, Z, 50V      | C825    | ECKCNS152MEJ | C 1500PF, M, MTV   |
| C615    | ECKF1H221KB  | C 220PF, K, 50V       | C826    | ECEA0JU101   | E 100UF, 6.3V      |
| C616    | ECKF1H221KB  | C 220PF, K, 50V       | C827    | ECEA1EGE101  | E 100UF, 25V       |
| C619    | ECCF1H100DC  | C 10PF, D, 50V        | C828    | ECEA1CGE102  | E 1000UF, 16V MTV  |
| C620    | ECQB1H563JF  | P 0.056UF, J, 50V     | C829    | ECEA1CGE101  | E 100UF, 16V       |
| C621    | ECCF1H150JC  | C 15PF, J, 50V        | C830    | ECEA0JGE102  | E 1000UF, 6.3V MTV |
| C622    | ECEA1HU3R3   | E 3.3UF, 50V          | C831    | ECKD2H152KB2 | C 1500PF, K, 500V  |
| C623    | ECEA1HU2R2   | E 2.2UF, 50V          | C832    | ECEA2AGE100  | E 10UF, 100V       |
| C624    | ECEA1CU101   | E 100UF, 16V          | C835    | ECEA2AGE100  | E 10UF, 100V       |
| C625    | ECKF1H103ZF  | C 0.01UF, Z, 50V      | C836    | ECEA1VU101   | E 100UF, 35V       |
| C636    | ECKF1H472KB  | C 4700PF, K, 50V      | C837    | ECKD2H102KB2 | C 1000PF, K, 500V  |
| C637    | ECCF1H330J   | C 33PF, J, 50V        | C838    | ECKD2H103PU  | C 0.01UF, P, 500V  |
| C638    | ECCF1H330J   | C 33PF, J, 50V        | C839    | ECKD3D391JBN | C 390PF, J, 2KV    |
| C639    | ECCF1H330J   | C 33PF, J, 50V        | C840    | ECQV1H564JZ  | P 0.56UF, J, 50V   |
| C640    | ECKF1H103ZF  | C 0.01UF, Z, 50V      | C841    | ECQB1H473JF  | P 0.047UF, J, 50V  |
| C642    | ECEA1CU101   | E 100UF, 16V          | C843    | ECQV1H105JZ  | P 1UF, J, 50V      |

| Ref.No. | Part No.     | Description          | Ref.No. | Part No.     | Description          |
|---------|--------------|----------------------|---------|--------------|----------------------|
| C844    | ECKD3A821KBN | C 820PF, K, 1KV      | C2006   | ECUX1H101JRX | C 100PF, J, 50V      |
| C845    | ECKDNS471MBJ | C 470PF, M,          | C2007   | ECUX1H330JRX | C 33PF, J, 50V       |
| C1101   | ECCF1H820J   | C 82PF, J, 50V       | C2008   | ECUX1H330JRX | C 33PF, J, 50V       |
| C1102   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | C2009   | ECUX1H331JRX | C 330PF, J, 50V      |
| C1103   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | C2010   | ECUX1H682KBX | C 6800PF, K, 50V MTV |
| C1104   | ECKF1H561KB  | C 560PF, K, 50V      | C2011   | ECUX1H680JCX | C 68PF, J, 50V       |
| C1105   | ECCF1H330JP  | C 33PF, J, 50V       | C2012   | ECUX1H151JRX | C 150PF, J, 50V      |
| C1106   | ECCF1H330JP  | C 33PF, J, 50V       | C2013   | ECUX1H151JRX | C 150PF, J, 50V      |
| C1107   | ECEA0JU101   | E 100UF, 6.3V        | C2014   | ECQV1H104JZ  | P 0.1UF, J, 50V      |
| C1108   | ECKF1H101KB  | C 100PF, K, 50V      | C2015   | ECQV1H224JZ  | P 0.22UF, J, 50V     |
| C1118   | ECKF1H101KB  | C 100PF, K, 50V      | C2016   | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV |
| C1119   | ECEA0JU101   | E 100UF, 6.3V        | C2017   | ECEA1CU470   | E 47UF, 16V          |
| C1121   | ECEA1HU2R2   | E 2.2UF, 50V         | C2018   | ECEA1CU470   | E 47UF, 16V          |
| C1124   | ECKF1H101KB  | C 100PF, K, 50V      | C2019   | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV |
| C1126   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | C2020   | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV |
| C1127   | ECEA1CU100   | E 10UF, 16V          | C2021   | ECEA1CU470   | E 47UF, 16V          |
| C1128   | ECKF1H101KB  | C 100PF, K, 50V      | C2022   | ECEA1CU100   | E 10UF, 16V          |
| C1129   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | C2023   | ECQV1H224JZ  | P 0.22UF, J, 50V     |
| C1130   | ECEA0JU222   | E 2200UF, 6.3V       | C2024   | ECUX1H331JRX | C 330PF, J, 50V      |
| C1134   | ECKF1H221KB  | C 220PF, K, 50V      | C2025   | ECUX1H680JRX | C 68PF, J, 50V       |
| C1135   | ECEA0JU471   | E 470UF, 6.3V        | C2026   | ECUX1H331JRX | C 330PF, J, 50V      |
| C1136   | ECCF1H101J   | C 100PF, J, 50V      | C2027   | ECUX1H680JRX | C 68PF, J, 50V       |
| C1137   | ECQB1H223KF  | P 0.022UF, K, 50V    | C2028   | ECQV1H224JZ  | P 0.22UF, J, 50V     |
| C1144   | ECEA1CU220   | E 22UF, 16V          | C2029   | ECEA1CU100   | E 10UF, 16V          |
| C1145   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | C2030   | ECEA1CU470   | E 47UF, 16V          |
| C1163   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | C2031   | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV |
| C1166   | ECEA1CU100   | E 10UF, 16V          | C2032   | ECEA1CU470   | E 47UF, 16V          |
| C1167   | ECEA1EU4R7   | E 4.7UF, 25V         | C2033   | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV |
| C1172   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | C2034   | ECUX1H101JRX | C 100PF, J, 50V      |
| C1176   | ECKF1H101KB  | C 100PF, K, 50V      | C2035   | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV |
| C1177   | ECKF1H681KB  | C 680PF, K, 50V      | C2037   | ECEA1AU101   | E 100UF, 10V         |
| C1178   | ECCF1H101JC  | C 100PF, J, 50V      | C2039   | ECUX1H102JCX | C 1000PF, J, 50V     |
| C1179   | ECCF1H101J   | C 100PF, J, 50V      | C2040   | ECUX1H102JCX | C 1000PF, J, 50V     |
| C1180   | ECKF1H151KB  | C 150PF, K, 50V      | C2041   | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV |
| C1201   | ECEA0JKS470  | E 47UF, 6.3V         | C2042   | ECQB1H223KF  | P 0.022UF, K, 50V    |
| C1202   | ECEA1HKS010  | E 1UF, 50V           | C2043   | ECQV1H334JZ  | P 0.33UF, J, 50V     |
| C1203   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | C2044   | ECEA1CU220   | E 22UF, 16V          |
| C1204   | ECCF1H561J   | C 560PF, J, 50V      | C2045   | ECUX1H180JRX | C 18PF, J, 50V       |
| C2001   | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV | C2046   | ECEA1CN100S  | E 10UF, 16V          |
| C2002   | ECQB1H223KF  | P 0.022UF, K, 50V    | C2047   | ECEA1CU470   | E 47UF, 16V          |
| C2003   | ECQB1H223KF  | P 0.022UF, K, 50V    | C2048   | ECUX1H180JRX | C 18PF, J, 50V       |
| C2004   | ECQV1H104JZ  | P 0.1UF, J, 50V      | C2049   | ECEA1CN100S  | E 10UF, 16V          |
| C2005   | ECUX1H101JRX | C 100PF, J, 50V      | C2050   | ECEA1CN470S  | E 47UF, 16V          |

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| Ref.No. | Part No.     | Description          | Ref.No. | Part No.    | Description       |
|---------|--------------|----------------------|---------|-------------|-------------------|
| C2051   | ECEA1CN470S  | E 47UF, 16V          | C2316   | ECEA1HU100  | E 10UF, 50V       |
| C2056   | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV | C2317   | ECEA1EGE102 | E 1000UF, 25V     |
| C2060   | ECQV1H104JZ  | P 0.1UF, J, 50V      | C2318   | ECEA1CU470  | E 47UF, 16V       |
| C2061   | ECUX1H101JRX | C 100PF, J, 50V      | C2319   | ECEA1CU100  | E 10UF, 16V       |
| C2062   | ECUX1H101JRX | C 100PF, J, 50V      | C2320   | ECEA1HU101  | E 100UF, 50V      |
| C2066   | ECKF1H102KB  | C 1000PF, K, 50V     | C2321   | ECEA1HU101  | E 100UF, 50V      |
| C2067   | ECKF1H102KB  | C 1000PF, K, 50V     | C2322   | ECEA1HU101  | E 100UF, 50V      |
| C2068   | ECKF1H272KB  | C 2700PF, K, 50V     | C2323   | ECEA1EN470S | E 47UF, 25V       |
| C2069   | ECKF1H272KB  | C 2700PF, K, 50V     | C2324   | ECKF1H103ZF | C 0.01UF, Z, 50V  |
| C2070   | ECKF1H151KB  | C 150PF, K, 50V      | C2325   | ECQB1H473KF | P 0.047UF, K, 50V |
| C2071   | ECCF1H151J   | C 150PF, J, 50V      | C2326   | ECKF1H103ZF | C 0.01UF, Z, 50V  |
| C2072   | ECUX1H102KBN | C 1000PF, K, 50V     | C2327   | ECEA1CU100  | E 10UF, 16V       |
| C2073   | ECUX1H102KBN | C 1000PF, K, 50V     | C2328   | ECQB1H473KF | P 0.047UF, K, 50V |
| C2203   | ECQV1H224JZ  | P 0.22UF, J, 50V     | C2329   | ECKF1H223ZF | C 0.022UF, Z, 50V |
| C2204   | ECEA1EN4R7S  | E 4.7UF, 25V         | C2330   | ECKF1H223ZF | C 0.022UF, Z, 50V |
| C2205   | ECEA1EN4R7S  | E 4.7UF, 25V         | C2331   | ECEA1HUR33  | E 0.33UF, 50V     |
| C2206   | ECKF1H102KB  | C 1000PF, K, 50V     | C2332   | ECEA1HUR33  | E 0.33UF, 50V     |
| C2207   | ECCF1H470J   | C 47PF, J, 50V       | C2333   | ECEA1HU010  | E 1UF, 50V        |
| C2208   | ECCF1H120JC  | C 12PF, J, 50V       | C2334   | ECEA1EN470S | E 47UF, 25V       |
| C2209   | ECEA1CU101   | E 100UF, 16V         | C2335   | ECEA1HU010  | E 1UF, 50V        |
| C2210   | ECQB1H223KF  | P 0.022UF, K, 50V    | C2336   | ECEA1EGE102 | E 1000UF, 25V     |
| C2212   | ECQV1H104JZ  | P 0.1UF, J, 50V      | C2338   | ECEA1HU101  | E 100UF, 50V      |
| C2213   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | C2339   | ECEA1HU010  | E 1UF, 50V        |
| C2214   | ECEA1EN4R7S  | E 4.7UF, 25V         | C2340   | ECEA1CU100  | E 10UF, 16V       |
| C2216   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | G2341   | ECEA1CU100  | E 10UF, 16V       |
| C2217   | ECEA1CU100   | E 10UF, 16V          | C2342   | ECKF1H103ZF | C 0.01UF, Z, 50V  |
| C2218   | ECEA1CN470S  | E 47UF, 16V          | C2343   | ECQB1H473KF | P 0.047UF, K, 50V |
| C2219   | ECEA1CN470S  | E 47UF, 16V          | C2344   | ECQB1H473KF | P 0.047UF, K, 50V |
| C2301   | ECEA1HN2R2S  | E 2.2UF, 50V         | C2345   | ECEA1HU100  | E 10UF, 50V       |
| C2302   | ECEA1HN2R2S  | E 2.2UF, 50V         | C2346   | ECEA1CU100  | E 10UF, 16V       |
| C2303   | ECEA1CU470   | E 47UF, 16V          | C2347   | ECEA1HN2R2S | E 2.2UF, 50V      |
| C2304   | ECEA1HU010   | E 1UF, 50V           | C2348   | ECQB1H473KF | P 0.047UF, K, 50V |
| C2305   | ECQB1H823KF  | P 0.082UF, K, 50V    | C2349   | ECQB1H473KF | P 0.047UF, K, 50V |
| C2306   | ECEA1CU100   | E 10UF, 16V          | C3001   | ECKF1H103ZF | C 0.01UF, Z, 50V  |
| C2307   | ECQV1H104JZ  | P 0.1UF, J, 50V      | C3004   | ECEA1HU010  | E 1UF, 50V        |
| C2308   | ECQB1H222KF  | P 2200PF, K, 50V     | C3005   | ECEA1HU010  | E 1UF, 50V        |
| C2309   | ECQB1H223KF  | P 0.022UF, K, 50V    | C3006   | ECEA1HN010S | E 1UF, 50V        |
| C2310   | ECQB1H223KF  | P 0.022UF, K, 50V    | C3007   | ECEA1HU010  | E 1UF, 50V        |
| C2311   | ECEA1HN2R2S  | E 2.2UF, 50V         | C3009   | ECEA1HU010  | E 1UF, 50V        |
| C2312   | ECEA1HN2R2S  | E 2.2UF, 50V         | C3011   | ECEA1CU101  | E 100UF, 16V      |
| C2313   | ECEA1EGE102  | E 1000UF, 25V        | C3012   | ECEA1CN100S | E 10UF, 16V       |
| C2314   | ECEA1HN2R2S  | E 2.2UF, 50V         | C3013   | ECEA1CU220  | E 22UF, 16V       |
| C2315   | ECEA1CU100   | E 10UF, 16V          | C3015   | ECEA1CU220  | E 22UF, 16V       |

| Ref.No. | Part No.     | Description          | Ref.No.      | Part No.     | Description          |
|---------|--------------|----------------------|--------------|--------------|----------------------|
| C3017   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | C3553        | ECA1CM221    | E 220UF, 16V         |
| C3018   | ECEA1HU010   | E 1UF, 50V           | C3554        | ECUX1H100FCN | C 10PF, F, 50V MTV   |
| C3020   | ECEA1HU010   | E 1UF, 50V           | C3555        | ECEA1CKN330  | E 33UF, 16V          |
| C3021   | ECEA1CU101   | E 100UF, 16V         | C3556        | ECUX1H100FCN | C 10PF, F, 50V MTV   |
| C3022   | ECEA1AU471   | E 470UF, 10V         | C3557        | ECUX1H330JX  | C 33PF, J, 50V MTV   |
| C3023   | ECEA1HN010S  | E 1UF, 50V           | C3558        | ECUX1H680JCX | C 68PF, J, 50V       |
| C3024   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | C3559        | ECUX1H470JRX | C 47PF, J, 50V MTV   |
| C3037   | ECEA1HU010   | E 1UF, 50V           | C3561        | ECEA1HKA010  | E 1UF, 50V           |
| C3061   | ECCF1H150JC  | C 15PF, J, 50V       | C3565        | ECUX1H100FCN | C 10PF, F, 50V MTV   |
| C3062   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | C3566        | ECUX1H821KBX | C 820PF, K, 50V      |
| C3069   | ECKF1H471KB  | C 470PF, K, 50V      | C3567        | ECUX1H821KBX | C 820PF, K, 50V      |
| C3070   | ECEA1CU100   | E 10UF, 16V          | C3568        | ECUX1H821KBX | C 820PF, K, 50V      |
| C3071   | ECEA1CN470S  | E 47UF, 16V          | C3569        | ECA1CM221    | E 220UF, 16V         |
| C3084   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | C3570        | ECA0JM471    | E 470UF, 6.3V        |
| C3085   | ECKF1H103ZF  | C 0.01UF, Z, 50V     | C3571        | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV |
| C3086   | ECKF1H101KB  | C 100PF, K, 50V      | C3572        | ECUX1H121JX  | C 120PF, J, 50V MTV  |
| C3111   | ECKF1H102KB  | C 1000PF, K, 50V     | C3573        | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV |
| C3112   | ECKF1H102KB  | C 1000PF, K, 50V     | C3575        | ECA1CM101    | E 100UF, 16V         |
| C3113   | ECKF1H102KB  | C 1000PF, K, 50V     | C3576        | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV |
| C3114   | ECKF1H102KB  | C 1000PF, K, 50V     | C3577        | ECEA0JKA101  | E 100UF, 6.3V        |
| C3117   | ECKF1H102KB  | C 1000PF, K, 50V     | C3578        | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV |
| C3118   | ECKF1H102KB  | C 1000PF, K, 50V     | C3580        | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV |
| C3502   | ECQV1H104JZ  | P 0.1UF, J, 50V      | C3581        | ECEA0JKN220  | E 22UF, 6.3V         |
| C3503   | ECQV1H104JZ  | P 0.1UF, J, 50V      | C3583        | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV |
| C3505   | ECUX1H104ZFW | C 0.1UF, Z, 50V      | C3585        | ECUX1H150JCX | C 15PF, J, 50V       |
| C3518   | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV | <b>COILS</b> |              |                      |
| C3522   | ECUX1H102JCX | C 1000PF, J, 50V     | L101         | EIV7ES005B   | TUNING COIL          |
| C3524   | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV | L103         | TLTACC8R2K   | PEAKING COIL 8.2U    |
| C3525   | ECEA1CKA470  | E 47UF, 16V          | L104         | TLTACC8R2K   | PEAKING COIL 8.2U    |
| C3526   | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV | L105         | EIV7EN034B   | COIL                 |
| C3532   | ECQB1H223JF  | P 0.022UF, J, 50V    | L106         | EIV7EN150B   | COIL                 |
| C3533   | ECQV1H104JZ  | P 0.1UF, J, 50V      | L107         | TLTACC151K   | PEAKING COIL         |
| C3534   | ECA0JM471    | E 470UF, 6.3V        | L109         | EIV7EN175B   | COIL                 |
| C3539   | ECUX1H101JCX | C 100PF, J, 50V      | L110         | TLTACC121K   | PEAKING COIL         |
| C3540   | ECUX1H101JCX | C 100PF, J, 50V      | L112         | TLTACC8R2K   | PEAKING COIL 8.2U    |
| C3541   | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV | L123         | TLTACC121K   | PEAKING COIL         |
| C3542   | ECEA1CU100   | E 10UF, 16V          | L130         | EIV7ES004B   | IF TRANS             |
| C3544   | ECUX1H150JCX | C 15PF, J, 50V       | L132         | TLI157051    | FILTER               |
| C3545   | ECUX1H270JCX | C 27PF, J, 50V       | L133         | TLTACCR56M   | PEAKING COIL         |
| C3546   | ECUX1H103ZFX | C 0.01UF, Z, 50V MTV | L140         | TLTACC180K   | PEAKING COIL 18U     |
| C3548   | ECEA0JKA101  | E 100UF, 6.3V        | L141         | TLTACC120K   | PEAKING COIL 12U     |
| C3550   | ECEA1HKN010  | E 1UF, 50V MTV       | L142         | TLTACC180K   | PEAKING COIL 18U     |
| C3552   | ECUX1H103ZFX | C 0.01UF, Z, 50V     | L143         | TLTACC180K   | PEAKING COIL 18U     |

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| Ref.No. | Part No.     | Description       | Ref.No.             | Part No.     | Description          |
|---------|--------------|-------------------|---------------------|--------------|----------------------|
| L202    | EIS7ES002B   | COIL              | L1110               | TSK1002      | COIL                 |
| L203    | TLTACC100K   | PEAKING COIL 10U  | L1111               | TLTABT100K   | PEAKING COIL 10U     |
| L303    | ELB4L161B    | COIL              | L1112               | TLTABT100K   | CORE                 |
| L436    | TLTACC101K   | PEAKING COIL 100U | L1113               | EXCELD35C    | PEAKING COIL 10U     |
| L501    | EXCELSA35T   | BEADS CORE MTV    | L1114               | TLTABT100K   | PEAKING COIL 10U     |
| L502    | ELH5L7004    | COIL              | L1115               | TLTABT100K   | PEAKING COIL 10U     |
| L504    | ELC08D055    | COIL              | L1127               | TLTACC101K   | PEAKING COIL 100U    |
| L505    | EXCELSA35T   | BEADS CORE MTV    | L1143               | EXCELSA35T   | BEADS CORE MTV       |
| L506    | EXCELSA35T   | BEADS CORE MTV    | L1144               | EXCELSA35T   | BEADS CORE MTV       |
| L511    | TSK1002      | COIL              | L2001               | TLTACC102K   | PEAKING COIL         |
| L512    | TSK1002      | COIL              | L2002               | TLTACC102K   | PEAKING COIL         |
| L603    | EIK7ES004B   | COIL              | L2003               | EXCEMT103DTM | CAPACITOR ARRAY      |
| L617    | TLTACC100K   | PEAKING COIL 10U  | L2004               | EXCEMT103DTM | CAPACITOR ARRAY      |
| L641    | TLTABT100K   | PEAKING COIL 10U  | L2006               | TLTACC180K   | PEAKING COIL 18U     |
| L642    | TLTABT100K   | PEAKING COIL 10U  | L2008               | TLTACC180K   | PEAKING COIL 18U     |
| L643    | TLTABT100K   | PEAKING COIL 10U  | L2016               | TLTACC180K   | PEAKING COIL 18U     |
| L655    | EFDEN645A11G | DELAY LINE        | L2017               | TLTACC180K   | PEAKING COIL 18U     |
| L701    | TLH13711     | CHOKE COIL        | L2018               | TLTACC180K   | PEAKING COIL 18U     |
| L801    | ELF18D860D   | LINE FILTER       | L2210               | EIS7EN036B   | COIL                 |
| L802    | ELF18D650W   | LINE FILTER MTV   | L3021               | EXCELD35V    | CORE                 |
| L803    | TSC930-4     | CHOKE COIL        | L3501               | TLTACC4R7K   | PEAKING COIL 4.7U    |
| L804    | EXCELSA35T   | BEADS CORE MTV    | L3504               | TLTACC100K   | PEAKING COIL 10U     |
| L805    | TSC930-4     | CHOKE COIL        | L3507               | TLTACC100K   | PEAKING COIL 10U     |
| L806    | TSC930-4     | CHOKE COIL        | L3508               | TLTACC3R3K   | PEAKING COIL 3.3U    |
| L807    | TSC930-4     | CHOKE COIL        | L3509               | TLTACC3R3K   | PEAKING COIL 3.3U    |
| L808    | EXCELSA35T   | BEADS CORE MTV    | L3510               | TLTACC100K   | PEAKING COIL 10U     |
| L809    | EXCELSA35T   | BEADS CORE MTV    | L3511               | TLTACC3R3K   | PEAKING COIL 3.3U    |
| L810    | EXCELSA35T   | BEADS CORE MTV    | L3512               | TLTACC3R3K   | PEAKING COIL 3.3U    |
| L812    | TSC930-4     | CHOKE COIL        | L3516               | TLTACC4R7K   | PEAKING COIL 4.7U    |
| L818    | TLP15154Q    | COIL MTV          | L3518               | EXCELD35V    | CORE                 |
| L819    | EXCELSA35T   | BEADS CORE MTV    | L3541               | TLTACC101K   | PEAKING COIL 100U    |
| L820    | EXCELSA35T   | BEADS CORE MTV    | LC101               | ELB5A024     | COIL                 |
| L821    | EXCELSA35T   | BEADS CORE MTV    | LC602               | TAXSAB4250   | FILTER MTV           |
| L823    | TSC930-4     | CHOKE COIL        | LC670               | ELB4K133B    | COIL MTV             |
| L1101   | TLTABT100K   | PEAKING COIL 10U  | LC3072              | ELB4L124B    | COIL                 |
| L1102   | TLTABT100K   | PEAKING COIL 10U  | <b>TRANSFORMERS</b> |              |                      |
| L1103   | TLTABT100K   | PEAKING COIL 10U  | T501                | TLF15562F    | FLYBACK TRANS. MTV△  |
| L1104   | TLTABT100K   | PEAKING COIL 10U  | T502                | ETH19Y70AY   | H DRIVE TRANS △      |
| L1105   | TLTABT100K   | PEAKING COIL 10U  | T801                | ETS39AF1D6NC | SWITCHING TRANS. MTV |
| L1106   | EXCELSA35T   | BEADS CORE MTV    | T2001               | TLS158X53Q1  | COIL MTV             |
| L1107   | EXCELSA35T   | BEADS CORE MTV    | <b>DIODES</b>       |              |                      |
| L1108   | TSC930-4     | CHOKE COIL        | D141                | MA162        | DIODE                |
| L1109   | EXCELSA35T   | BEADS CORE MTV    | D152                | MA4051M      | DIODE                |

| Ref.No. | Part No.     | Description          | Ref.No.                    | Part No.     | Description    |
|---------|--------------|----------------------|----------------------------|--------------|----------------|
| D202    | MA165        | DIODE                | D827                       | TVSEU2       | DIODE          |
| D203    | MA165        | DIODE                | D829                       | MA182        | DIODE          |
| D412    | MA165        | DIODE                | D830                       | MA4020       | DIODE          |
| D432    | MA29WA       | DIODE                | D831                       | EG01         | DIODE          |
| D433    | MA29WA       | DIODE                | D833                       | TVSEU1Z      | DIODE          |
| D434    | MA4051M      | DIODE                | D834                       | TVSEU1Z      | DIODE          |
| D461    | ERA15-01     | DIODE                | D1111                      | LN21RPHCF2   | LED MTV        |
| D462    | MA4360M      | DIODE                | D1112                      | MA165        | DIODE          |
| D502    | MA4360L      | DIODE                | D1117                      | MA4036H      | DIODE          |
| D503    | MA167        | DIODE                | D1120                      | MA4068M      | DIODE          |
| D504    | TVSEU2       | DIODE                | D1121                      | MA4068M      | DIODE          |
| D506    | TVSRU2AM     | DIODE                | D1132                      | MA4082H      | DIODE          |
| D507    | ERB06-15     | DIODE                | D1176                      | MA165        | DIODE          |
| D508    | TVSEU2       | DIODE                | D1201                      | PH310        | DIODE MTV      |
| D509    | TVSEU2       | DIODE                | D2001                      | BB405B       | DIODE          |
| D522    | MA4108J      | DIODE                | D2003                      | MA165        | DIODE          |
| D523    | MA171        | DIODE                | D2004                      | BB809        | DIODE          |
| D531    | TVSEU2       | DIODE                | D2303                      | MA165        | DIODE          |
| D613    | MA165        | DIODE                | D3037                      | MA4180M      | DIODE          |
| D614    | MA165        | DIODE                | D3038                      | MA4180M      | DIODE          |
| D615    | MA165        | DIODE                | D3509                      | MA3082M      | DIODE          |
| D616    | MA165        | DIODE                | D3526                      | MA151K       | DIODE          |
| D634    | MA165        | DIODE                | D3527                      | MA3082M      | DIODE          |
| D635    | MA1062M      | DIODE                | D3528                      | MA151K       | DIODE          |
| D701    | MA165        | DIODE                | D3529                      | MA151K       | DIODE          |
| D702    | MA165        | DIODE                | D3530                      | MA151K       | DIODE          |
| D801    | TRPW5BON120D | POSISTOR MTV         | D3541                      | MA151K       | DIODE          |
| D803    | TLP621GR-LF2 | PHOTO COUPLER        | D3542                      | MA151K       | DIODE          |
| D804    | MA4160M      | DIODE                | D3566                      | MA151WA      | DIODE          |
| D806    | ENC621D-10A  | RESISTOR MODULAT.MTV | D3567                      | MA151WA      | DIODE          |
| D807    | TVSRU2AM     | DIODE                | D3568                      | MA151WA      | DIODE          |
| D808    | TVSRU1       | DIODE                | D3569                      | MA151K       | DIODE          |
| D809    | RU3YX-M      | DIODE                | <b>INTEGRATED CIRCUITS</b> |              |                |
| D810    | MA171        | DIODE                | IC101                      | AN5179K      | LINEAR IC      |
| D811    | RU3YX-M      | DIODE                | IC102                      | TVSUPD4066BC | C-MOS LOGIC IC |
| D812    | MA182        | DIODE                | IC104                      | AN5071       | LINEAR IC      |
| D817    | D4SB80Z      | DIODE                | IC105                      | TVSUPD4066BC | C-MOS LOGIC IC |
| D818    | MA162        | DIODE                | IC201                      | M52317SP     | LINEAR IC MTV  |
| D819    | MA4091H      | DIODE MTV            | IC402                      | TA8859P      | IC             |
| D820    | MA4360L      | DIODE                | IC451                      | TA8403K      | IC MTV         |
| D822    | MA182        | DIODE                | IC601                      | AN5607K      | LINEAR IC      |
| D824    | MA4062H      | ZENER DIODE          | IC802                      | STR-S6707    | IC MTV         |
| D825    | TVSEU1       | DIODE                | IC803                      | SE140N       | IC             |

# TX-21GF10M/Z

| Ref.No.            | Part No.     | Description    | Ref.No. | Part No.    | Description    |
|--------------------|--------------|----------------|---------|-------------|----------------|
| IC804              | AN78M05LB    | LINEAR IC      | Q655    | 2SC1685-R   | TRANSISTOR     |
| IC805              | UPC2412HF    | IC MTV         | Q670    | 2SA564AR    | TRANSISTOR     |
| IC806              | AN7809       | LINEAR IC      | Q705    | 2SA564AR    | TRANSISTOR     |
| IC807              | AN7805       | LINEAR IC      | Q706    | 2SD1266A    | TRANSISTOR     |
| IC1102             | MN152810TTD  | MOS IC         | Q707    | 2SA1309A    | TRANSISTOR     |
| IC1104             | 24C01AIPB21  | IC MTV         | Q802    | 2SB1438     | TRANSISTOR MTV |
| IC1106             | MN1280R      | IC (MOS IC)    | Q803    | 2SC1473     | TRANSISTOR     |
| IC1201             | UPC2801AHA   | IC MTV         | Q804    | 2SC1984LF-4 | TRANSISTOR MTV |
| IC2001             | TDA8732/C1   | IC             | Q806    | 2SA564AR    | TRANSISTOR     |
| IC2002             | SAA7282ZP/M3 | LINEAR IC      | Q807    | TF361MA     | SAW FILTER MTV |
| IC2003             | AN6558       | LINEAR IC      | Q1101   | 2SC1685-R   | TRANSISTOR     |
| IC2201             | TDA8417/V3   | LINEAR IC MTV  | Q1111   | 2SC1685-R   | TRANSISTOR     |
| IC2206             | AN5215       | LINEAR IC      | Q1112   | UN4212      | TRANSISTOR     |
| IC2301             | UPC1891ACY   | IC             | Q1113   | UN4212      | TRANSISTOR     |
| IC2302             | CXA1279AS    | IC             | Q1136   | 2SC1685-R   | TRANSISTOR     |
| IC2303             | AN7169       | LINEAR IC      | Q1160   | 2SC1685-R   | TRANSISTOR     |
| IC2306             | TVSM5218L    | LINEAR IC      | Q2002   | 2SC2480TTX  | TRANSISTOR MTV |
| IC3001             | AN5858K      | LINEAR IC      | Q2003   | 2SC2480TTX  | TRANSISTOR MTV |
| IC3501             | SAA5246AP/E  | IC MTV         | Q2004   | 2SD601ATX   | TRANSISTOR MTV |
| IC3503             | 24C01AIPB21  | IC MTV         | Q2005   | 2SD601ATX   | TRANSISTOR MTV |
| IC3506             | LC3564QM-10  | LINEAR IC MTV  | Q2006   | 2SD601ATX   | TRANSISTOR MTV |
| IC3507             | MAB8461P/223 | IC MTV         | Q2301   | 2SC1685-R   | TRANSISTOR     |
| <b>TRANSISTORS</b> |              |                | Q2302   | 2SC1685-R   | TRANSISTOR     |
| Q101               | 2SC2188      | TRANSISTOR     | Q2303   | 2SA564AR    | TRANSISTOR     |
| Q102               | 2SC1685-R    | TRANSISTOR     | Q3001   | 2SC1685-R   | TRANSISTOR     |
| Q103               | 2SC1685-R    | TRANSISTOR     | Q3006   | 2SC1685-R   | TRANSISTOR     |
| Q105               | 2SC2058S     | TRANSISTOR     | Q3015   | 2SC1685-R   | TRANSISTOR     |
| Q108               | UN4212       | TRANSISTOR     | Q3016   | 2SC1685-R   | TRANSISTOR     |
| Q110               | 2SC2058S     | TRANSISTOR     | Q3024   | 2SC1685-R   | TRANSISTOR     |
| Q115               | 2SA564AR     | TRANSISTOR     | Q3061   | 2SC1685-R   | TRANSISTOR     |
| Q116               | UN4214       | TRANSISTOR     | Q3062   | 2SC1685-R   | TRANSISTOR     |
| Q117               | 2SC1685-R    | TRANSISTOR     | Q3071   | 2SC1685-R   | TRANSISTOR     |
| Q168               | 2SC1685-R    | TRANSISTOR     | Q3072   | 2SC1685-R   | TRANSISTOR     |
| Q301               | 2SC1685-R    | TRANSISTOR     | Q3084   | 2SC1685-R   | TRANSISTOR     |
| Q302               | 2SC1685-R    | TRANSISTOR     | Q3501   | 2SD601ATX   | TRANSISTOR MTV |
| Q351               | 2SC2923      | TRANSISTOR     | Q3502   | 2SD601ATX   | TRANSISTOR MTV |
| Q352               | 2SC2923      | TRANSISTOR     | Q3503   | 2SD601ATX   | TRANSISTOR MTV |
| Q353               | 2SC2923      | TRANSISTOR     | Q3504   | 2SD601ATX   | TRANSISTOR MTV |
| Q451               | 2SA564AR     | TRANSISTOR     | Q3505   | 2SD601ATX   | TRANSISTOR MTV |
| Q501               | 2SD1555      | TRANSISTOR MTV | Q3506   | 2SD601ATX   | TRANSISTOR MTV |
| Q502               | 2SC3941H     | TRANSISTOR MTV | Q3508   | 2SD601ATX   | TRANSISTOR MTV |
| Q503               | 2SA564AR     | TRANSISTOR     | Q3513   | 2SD601ATX   | TRANSISTOR MTV |
| Q511               | 2SC1685-R    | TRANSISTOR     | Q3514   | 2SB709ATX   | TRANSISTOR MTV |

| Ref.No.       | Part No.    | Description          | Ref.No. | Part No.     | Description        |
|---------------|-------------|----------------------|---------|--------------|--------------------|
| Q3515         | 2SD601ATX   | TRANSISTOR MTV       | S1101   | EVQ-PBD05    | SWITCH MTV         |
| Q3522         | 2SB709ATX   | TRANSISTOR MTV       | S1102   | EVQQKH06K    | SWITCH             |
| Q3525         | 2SB709ATX   | TRANSISTOR MTV       | S1103   | EVQQKH06K    | SWITCH             |
| Q3526         | 2SD601ATX   | TRANSISTOR MTV       | S1104   | EVQQKH06K    | SWITCH             |
| Q3527         | 2SD601ATX   | TRANSISTOR MTV       | S1108   | EVQQKH06K    | SWITCH             |
| Q3566         | 2SD601ATX   | TRANSISTOR MTV       | S1109   | EVQQKH06K    | SWITCH             |
| <b>OTHERS</b> |             |                      | S1110   | EVQQKH06K    | SWITCH             |
| E.20          | TJS5A9420   | 8P CONNECTOR         | S1111   | EVQQKH06K    | SWITCH             |
| E.21          | TJS5A9420   | 8P CONNECTOR         | S1112   | EVQQKH06K    | SWITCH             |
| E.22          | TJS118610   | 4P CONNECTOR         | S1113   | EVQQKH06K    | SWITCH             |
| E.32          | TJS118620   | 5P CONNECTOR         | T.1     | TJS5A8170    | CONNECTOR          |
| E.33          | TJS118610   | 4P CONNECTOR         | T.1     | TJS6A8560    | 4P CONNECTOR       |
| E.82          | TJS5A9830   | 8P CONNECTOR         | T.2     | TJS5A9490    | 8P CONNECTOR MTV   |
| E.83          | TJS5A9830   | 8P CONNECTOR         | T.2     | TJS5A9500    | 6P CONNECTOR       |
| F801          | XBA2C31TR0  | FUSE 250V 3.15A △    | T.3     | TJS5A8160    | 8P CONNECTOR       |
| F-801         | TJC6320     | FUSE HOLDER, SMALL △ | T.3     | TJS5A9420    | 8P CONNECTOR       |
| JA.1          | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X101    | TFCH38MVK03  | SAW FILTER         |
| JA.2          | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X102    | EFCS6R5MW5   | CERAMIC FILTER     |
| JA.4          | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X103    | EFCS6R0MW5   | CERAMIC FILTER     |
| JA.5          | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X104    | EFCS5M7MW3   | CERAMIC FILTER     |
| JA.6          | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X105    | EFCS4R5MW3BA | CERAMIC TRAP       |
| JA.7          | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X106    | EFCH32MVK2N  | SAW FILTER △       |
| JA.8          | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X201    | EFCS5R5MS5   | CERAMIC FILTER     |
| JBA.          | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X202    | EFCS4R5MS5   | FILTER             |
| JBB.          | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X203    | EFCS6R5MS5   | CERAMIC FILTER     |
| JBC.          | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X205    | EFCS5R5MS5   | CERAMIC FILTER     |
| JBY.          | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X206    | SFSH6R0MDB   | CERAMIC FILTER MTV |
| JS.1          | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X212    | CSB1000J527  | CRYSTAL OSC MTV    |
| JS.3          | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X506    | CSB500F48    | CRYSTAL OSC MTV    |
| JS.6          | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X632    | TS116M20     | CRYSTAL OSC MTV    |
| JS.11         | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X634    | TS816M32     | CRYSTAL OSC MTV    |
| JS.12         | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X1102   | TAF10020     | CERAMIC FILTER MTV |
| JS.14         | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X2001   | TSS2139M     | CRYSTAL MTV        |
| JS.15         | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X2002   | TSS2061-M    | CRYSTAL            |
| JS.16         | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X2003   | EFCA5R5MB3   | CERAMIC TRAP       |
| JS.20         | ERJ6GEY0R00 | M 00HM, J, 1/10W     | X2201   | TSS2076-M    | CRYSTAL            |
| NC.1          | TJS5A9450   | 8P CONNECTOR         | X2202   | EFCS5R74MS5A | CERAMIC FILTER     |
| NC.2          | TJS5A8160   | 8P CONNECTOR         | X2203   | EFCS5R74MS5A | CERAMIC FILTER     |
| P.82          | TJS5A9840   | 8P CONNECTOR         | X3503   | TSS2077-M    | CRYSTAL            |
| P.83          | TJS5A9840   | 8P CONNECTOR         | X3506   | TSS2121-M    | CRYSTAL            |
| R.1           | TJS5A9900   | 6P CONNECTOR         |         |              |                    |
| S451          | EVQRAAL10   | SWITCH               |         |              |                    |
| S801          | ESB99902S   | SWITCH               |         |              |                    |